

# Dakotas Wind Transmission Study



Summary of Public Comments on Scope  
April 20, 2004



## **Background**

In 2003, Congress passed legislation which included funding for Western Area Power Administration to perform “a transmission study on the placement of 500 MW of wind energy in North Dakota and South Dakota.”

Western requested comments on the scope development of the *Dakotas Wind Transmission Study* (DWTS). More specifically, Western requested comments on study objectives, outcomes, and methods.

## **Overview**

Western received 70 comments from individual citizens, individual landowners, publications, elected officials/boards, utilities, and other stakeholders. Comments for each sector are discussed below.

Comments from individual citizens were generally positive and expressed support for development of wind power and for the study. Only one was negative; one simply requested information. Fourteen citizens identified their residence as South Dakota. The landowners expressed support for wind power development on their land. Six landowners are from North Dakota and three are from South Dakota. The publications expressed support for wind power development and for the study. Both of these submittals were from South Dakota.

The county boards generally expressed support for the development of wind power in their county and for the study. The South Dakota Public Utilities Commission expressed strong support by South Dakota land owners for wind power development; outlined its expectations that the study will generate an exhaustive identification of available and practical alternatives to maximize use of the transmission system in South Dakota; will generate detailed data on capacity issues, power flow issues, upgrade issues, and a comparison of the ease and cost effectiveness of potential enhancement to the system; identified some specific substation recommendations for new wind power; and requested that the process be kept sufficiently open to allow a thorough examination and full opportunity to be heard.

Investor-owned utilities encouraged close coordination with major regional studies currently under way and specifically cited the Northwest MAPP/MISO Exploratory study and the Red River Valley / West Central Minnesota Transmission Improvement Planning Study; urged consistency with overall Mid-continent Area Power Pool and Midwest Independent System Operator regional transmission plans; and cited a tremendous opportunity to explore new technology. One utility supported upgrading the Montana Dakotas Regional Study; and a cost share for specific projects. Another utility's comments did not support another transmission modeling study but did support using the study funds for specific, realistic projects. One group supports the use of \$150,000 of the Western appropriation to study the transmission requirements to deploy 100 megawatts of wind energy as it proposed; recommends that the transmission funding appropriation for wind development in the Dakotas be used as cost share/grant for specific bona-fide wind projects (site-specific, first come basis); study objectives could include updating the Montana Dakotas Regional Study incorporating specific known projects to date; study should result in specific transmission requirements that

relate to specific generation at specific locations, transmission studies that can be used to accurately determine the transmission requirements and related costs associated with the installation of specific wind and coal projects.

Other stakeholder comments covered a wide range of view points and topics.

A dozen groups signed onto and supported comments submitted by wind advocates. These comments stated that the appropriation should not be given to utilities or other entities contemplating studies since the study is to be under the direction and responsibility of Western; should quantify how much wind power could be delivered over existing lines using a curtailable firm transmission product, should analyze the North Dakota Export Boundary to determine the hourly loading compared to the hourly output of Dakotas wind generators; should identify specific transmission alternatives, should rank the alternatives by cost and feasibility, and should study both the backbone transmission and the underlying AC grid; should examine the operating impacts of the new wind power on the existing load and generation in the Dakotas, determine the amount of ancillary services required to support the development of an additional 500 MW of wind power; injection points should include current information from wind developers and others, markets should be considered both in and outside the Dakotas; could study the next 500 MW from the Western interconnection queue that have not already completed an interconnection study; the study must result in something useful; employ the most up to date methodologies (e.g. current wind turbine models); the study must be done in the light of day in an open and inclusive manner, should utilize a stakeholder group for technical review and check in at key points during the study process.

Other comments stated that American Indian tribes enjoy a tremendous untapped energy potential in reservation wind and solar resources and supports the need for Western to study the transmission system in the northern Great Plains for the potential of integrating wind into the system originally designed for the transmission of renewable hydropower from the mainstem dams on the Missouri River. Two additional comments: the study area should recognize the existing boundaries of the Western operating system and thus should include Montana and Wyoming; and consider how a significant portion of the next 500 MW could come from the region's two dozen Indian reservations.

While many of these reservations may not have filed into the Western interconnection queue, the Intertribal Council on Utility Policy filed a plan with the federal interagency working group on environmental justice and community revitalization for tribal wind development which lays out the potential opportunity for scalable and expandable reservation based wind projects ranging from 10 MW to 30-50 MW to 150 MW where interconnection could occur through the Western substations located on most of the reservations. Intertribal COUP would object to any scoping plan that would categorically limit consideration of projects to the Western interconnection queue. Intertribal COUP believes Western's federal responsibility to the aspirations and economic development goals of tribes in the region needs to be recognized and expressly included in the scoping requirements for determining injection points for new wind projects in the DWTS.

Additional comments included: support for an update of the existing study and the establishment of a cost sharing program for studies of specific wind projects; support for study of flexible firm transmission by looking at line loadings and timing and correlating with wind profiles, use of the new wind turbine models; recommendation to coordinate with other regional transmission planning, consider economics as well as reliability, use current, sophisticated wind turbine models; recommendations for the inclusion of several of specific wind projects in the study; study transmission issues related to both firm and non-firm delivery; and a request that the study either address a mix of energy resources or that it address the economics of building transmission to serve only wind, consideration should be given to a transmission product which makes available non-firm capacity on a priority contractual basis.

# ***Dakotas Wind Transmission Study Public Comments Received from***

<b><i>Name</i></b>	<b><i>Organization</i></b>	<b><i>City</i></b>	<b><i>State</i></b>
<a href="#"><u>Donald</u></a>	<a href="#"><u>Ackerman</u></a>	<a href="#"><u>Jamestown</u></a>	<a href="#"><u>ND</u></a>
<a href="#"><u>Bruce</u></a>	<a href="#"><u>Bailey</u></a>	<a href="#"><u>AWS Truewind, LLC</u></a>	<a href="#"><u>NY</u></a>
<a href="#"><u>George</u></a>	<a href="#"><u>Bauer</u></a>	<a href="#"><u>ND SEED member</u></a>	<a href="#"><u>ND</u></a>
<a href="#"><u>Robert A.</u></a>	<a href="#"><u>Bawdon</u></a>	<a href="#"><u>Hyde County Commissioners</u></a>	<a href="#"><u>SD</u></a>
<a href="#"><u>John</u></a>	<a href="#"><u>Blum</u></a>		<a href="#"><u>SD</u></a>
<a href="#"><u>Tom</u></a>	<a href="#"><u>Bohnet</u></a>	<a href="#"><u>Applied Engineering, Inc.</u></a>	<a href="#"><u>SD</u></a>
<a href="#"><u>Joe</u></a>	<a href="#"><u>Cannot</u></a>	<a href="#"><u>West Central Electric Cooperative</u></a>	<a href="#"><u>SD</u></a>
<a href="#"><u>Greg</u></a>	<a href="#"><u>Dean</u></a>	<a href="#"><u>SD Telecommunications Association</u></a>	<a href="#"><u>SD</u></a>
<a href="#"><u>Mike</u></a>	<a href="#"><u>Eggl</u></a>	<a href="#"><u>Resource Coalition</u></a> <a href="#"><u>Basin Electric Power Cooperative, Montana</u></a> <a href="#"><u>Dakota Utilities, Minnkota Power Cooperative,</u></a> <a href="#"><u>Heartland Consumer Power District, Missouri</u></a> <a href="#"><u>River Energy Services</u></a>	<a href="#"><u>ND/SD</u></a>
<a href="#"><u>Warren</u></a>	<a href="#"><u>Ernie</u></a>	<a href="#"><u>Wimbledon</u></a>	<a href="#"><u>ND</u></a>
<a href="#"><u>Averlene</u></a>	<a href="#"><u>Foster</u></a>	<a href="#"><u>Watertown</u></a>	<a href="#"><u>SD</u></a>
<a href="#"><u>Roger</u></a>	<a href="#"><u>Frey</u></a>	<a href="#"><u>Mobridge</u></a>	<a href="#"><u>SD</u></a>
<a href="#"><u>Dave</u></a>	<a href="#"><u>Gillen</u></a>	<a href="#"><u>South Dakota Corn Growers Association</u></a>	
<a href="#"><u>Krista</u></a>	<a href="#"><u>Gordon</u></a>	<a href="#"><u>Distributed Generation Systems</u></a>	<a href="#"><u>CO</u></a>
<a href="#"><u>Robert</u></a>	<a href="#"><u>Gough</u></a>	<a href="#"><u>Intertribal Council on Utility Policy</u></a>	<a href="#"><u>SD</u></a>

<b>Name</b>	<b>Organization</b>	<b>City</b>	<b>State</b>
<a href="#">Thomas P. Graves</a>	<a href="#">Mid-West Electric Consumers Association</a>		<a href="#">CO</a>
<a href="#">Walt Grivna</a>	<a href="#">Xcel Energy</a>	<a href="#">Minneapolis</a>	<a href="#">MN</a>
<a href="#">Leroy Guptill</a>		<a href="#">Martin</a>	<a href="#">SD</a>
<a href="#">Abi Harte</a>			<a href="#">SD</a>
<a href="#">H.G. Heig</a>	<a href="#">Watertown Municipal Utilities Department</a>	<a href="#">Watertown</a>	<a href="#">SD</a>
<a href="#">Renee Henja</a>	<a href="#">Applied Engineering, Inc.</a>	<a href="#">Yankton</a>	<a href="#">SD</a>
<a href="#">Herbert K. Hodson</a>		<a href="#">Martin</a>	<a href="#">SD</a>
<a href="#">Mike Hohl</a>	<a href="#">Wind Energy Council</a>		<a href="#">ND/SD</a>
<a href="#">Dean Hulse</a>	<a href="#">Dakota Resource Council</a>	<a href="#">Dickinson</a>	<a href="#">ND</a>
<a href="#">Frank James</a>	<a href="#">Dakota Rural Action</a>	<a href="#">Brookings</a>	<a href="#">SD</a>
<a href="#">Darrel Johnston</a>		<a href="#">Clark</a>	<a href="#">SD</a>
<a href="#">Leslie K. Kephart</a>	<a href="#">Clay County Commissioners</a>	<a href="#">Vermillion</a>	<a href="#">SD</a>
<a href="#">Mike Kula</a>		<a href="#">Gettysburg</a>	<a href="#">SD</a>
<a href="#">G. John Larson</a>			<a href="#">SD</a>
<a href="#">Larry Larson</a>		<a href="#">Wells County</a>	<a href="#">ND</a>
<a href="#">Ron Lehr</a>	<a href="#">AWEA</a>		<a href="#">CO</a>
<a href="#">Barb Lenling</a>	<a href="#">Spink County Commissioners</a>	<a href="#">Spink County</a>	<a href="#">SD</a>
<a href="#">Lynda Luymes</a>	<a href="#">Wessington Springs Area Development</a>	<a href="#">Wessington</a>	<a href="#">SD</a>

<b>Name</b>	<b>Organization</b>	<b>City</b>	<b>State</b>
<a href="#">Jeff</a>	<a href="#">Madison</a>	<a href="#">Kingsbury County Commissioners</a>	<a href="#">DeSmet</a> <a href="#">SD</a>
<a href="#">Tim</a>	<a href="#">Mathern</a>	<a href="#">ND Senate</a>	<a href="#">Fargo</a> <a href="#">ND</a>
<a href="#">R.J.</a>	<a href="#">Mertens</a>	<a href="#">Lyman County Commissioners</a>	<a href="#">Lyman County</a> <a href="#">SD</a>
<a href="#">Michael</a>	<a href="#">Milligan</a>	<a href="#">DOE/ NREL, National Wind Technology</a>	<a href="#">CO</a>
<a href="#">Mary</a>	<a href="#">Mitchell</a>		
<a href="#">Ronald L.</a>	<a href="#">Morrow</a>	<a href="#">Douglas County Board of County</a>	<a href="#">Armour</a> <a href="#">SD</a>
<a href="#">Jeffrey L.</a>	<a href="#">Nelson</a>	<a href="#">East River Electric Power Cooperative</a>	<a href="#">Madison</a> <a href="#">SD</a>
<a href="#">Ronald D.</a>	<a href="#">Olinger</a>	<a href="#">Law Office / SD Corn Growers Assoc</a>	<a href="#">Pierre</a> <a href="#">SD</a>
<a href="#">Jerry D.</a>	<a href="#">Peterson</a>	<a href="#">Peterson Realty</a>	<a href="#">Mobridge</a> <a href="#">SD</a>
<a href="#">David</a>	<a href="#">Plagge</a>		<a href="#">Emmons County</a> <a href="#">ND</a>
<a href="#">Richard</a>	<a href="#">Quaschnick</a>	<a href="#">Cambell County Commission</a>	<a href="#">Mound City</a> <a href="#">SD</a>
<a href="#">Joe</a>	<a href="#">Richardson</a>	<a href="#">Harnessing Dakota Wind North Dakota Farm Bureau, South Dakota Farm Bureau</a>	<a href="#">Fargo</a> <a href="#">ND</a>
<a href="#">Brian</a>	<a href="#">Ring</a>	<a href="#">Onida SD Economic Development Corp</a>	<a href="#">Onida</a> <a href="#">SD</a>
<a href="#">Mark S</a>	<a href="#">Roby</a>	<a href="#">Watertown Public Opinion</a>	<a href="#">Watertown</a> <a href="#">SD</a>
<a href="#">Tim</a>	<a href="#">Rogelstad</a>	<a href="#">Otter Tail Power Company</a>	<a href="#">MN/ND</a>
<a href="#">Lance</a>	<a href="#">Rom</a>		<a href="#">Rapid City</a> <a href="#">SD</a>
<a href="#">Robert K.</a>	<a href="#">Sahr</a>	<a href="#">South Dakota Public Utilities Commission</a>	<a href="#">Pierre</a> <a href="#">SD</a>

<b>Name</b>	<b>Organization</b>	<b>City</b>	<b>State</b>
<a href="#">Dawn Sattler</a>	<a href="#">Roberts County Commissioners</a>	<a href="#">Sisseton</a>	<a href="#">SD</a>
<a href="#">Sharon Schamber</a>	<a href="#">Freeman Community Development</a>	<a href="#">Freeman</a>	<a href="#">SD</a>
<a href="#">J Charles Smith</a>	<a href="#">consultant/UWIG/NWCC</a>		<a href="#">VA</a>
<a href="#">Beth Soholt</a>	<a href="#">Wind on the Wires American Wind Energy Association, Clipper Windpower Development, enXco, Environmental Law and Policy Center, GE Wind Energy, Izaak Walton League of America, Union of Concerned Scientists, Windustry, Dave Olsen, Intertribal COUP, Dakota Rural Action</a>	<a href="#">Saint Paul</a>	<a href="#">MN</a>
<a href="#">David Stoner</a>	<a href="#">Greenlight Energy, Inc Griggs/Steele Wind Development Group, McIntosh Wind Energy Committee</a>		<a href="#">VA/ND</a>
<a href="#">Jack Thomas</a>	<a href="#">Codington County, Board of County</a>	<a href="#">Watertown</a>	<a href="#">SD</a>
<a href="#">Margie Thoreson</a>		<a href="#">Bryant</a>	<a href="#">SD</a>
<a href="#">Scott VanderWal</a>		<a href="#">Volga</a>	<a href="#">SD</a>
<a href="#">Thomas Vandor</a>	<a href="#">General Electric Company, Energy Consulting</a>		<a href="#">NY</a>
<a href="#">Jerry Vaninetti</a>	<a href="#">Great Northern Power Development Kiewit Mining Group</a>	<a href="#">Golden</a>	<a href="#">CO</a>
<a href="#">Aaron Vansteenburgh</a>	<a href="#">Alliant Energy</a>		<a href="#">IA</a>
<a href="#">Stephanie Vogel</a>	<a href="#">Bookings County Commission</a>	<a href="#">Brookings</a>	<a href="#">SD</a>
<a href="#">Craig Weber</a>		<a href="#">Arlington</a>	<a href="#">SD</a>
<a href="#">Steve Wegman</a>	<a href="#">South Dakota Renewable Energy Association</a>	<a href="#">Pierre</a>	<a href="#">SD</a>
<a href="#">David Westbrook</a>	<a href="#">Heartland Consumers Power District</a>	<a href="#">Madison</a>	<a href="#">SD</a>

<b>Name</b>	<b>Organization</b>	<b>City</b>	<b>State</b>
<a href="#"><u>Robert White</u></a>	<a href="#"><u>ND SEED</u></a>	<a href="#"><u>Fargo</u></a>	<a href="#"><u>ND</u></a>
<a href="#"><u>Jerry Wilson</u></a>	<a href="#"><u>South Dakota Magazine</u></a>		<a href="#"><u>SD</u></a>
<a href="#"><u>Terry Wolf</u></a>	<a href="#"><u>Missouri River Energy Services</u></a> <a href="#"><u>Western Minnesota Municipal Power Agency,</u></a> <a href="#"><u>Watertown Municipal Utilities Department</u></a>	<a href="#"><u>Sioux Falls</u></a>	<a href="#"><u>SD</u></a>
<a href="#"><u>Elaine Wulff</u></a>	<a href="#"><u>Buffalo County Board of Commissioners</u></a>	<a href="#"><u>Gann Valley</u></a>	<a href="#"><u>SD</u></a>
<a href="#"><u>Lverne Yetterboe</u></a>		<a href="#"><u>Gackle</u></a>	<a href="#"><u>ND</u></a>