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ROLL NUMBER

DESCRIPTION

30226

2001 HOUSE NATURAL RESOURCES

HCR 3026

2001 HOUSE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. HCR 3026

House Natural Resources Committee

Conference Committee

Hearing Date February 15, 2001

Tape Number	Side A	Side B	Meter #
1	x		1254 to 4090
1		x	1777 to 2104
Committee Clerk Signature <i>D. J. [unclear]</i>			

Minutes:

Chairman Earl Rennerfeldt, Vice Chair Jon O. Nelson, Rep. Brekke, Rep. DeKrey, Rep. Droydal, Rep. Galvin, Rep. Keiser, Rep. Klein, Rep. Nottestad, Rep. Porter, Rep. Weiler, Rep. Hanson, Rep. Kelsh, Rep. Rep. Winrich.

Chairman Rennerfeldt: I will call the committee back to order and open the hearing on HCR 3026.

Rep. Mary Ekstrom - Dist. 11: (See written testimony).

Chairman Rennerfeldt: On line 13, you have Minot, Grand Forks and Minot listed?

Ekstrom: The primary reason for that is those are prime load centers. We felt that focusing on where the large load centers and prime sites were would be looked at first.

Chairman Rennerfeldt: I was just wondering why Williston wasn't in there.

Ekstrom: Williston is a prime site and we have had folks out there looking at it.

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House Natural Resources Committee

Bill/Resolution Number HCR 3026

Hearing Date February 15, 2001

Rep. Weiler: Line 14, class 5 wind resources, is that the highest?

Ekstrom: Actually there are class 6 sites also.

Rep. Weiler: Is 6 the highest?

Ekstrom: Yes, it is.

Chairman Rennerfeldt: What part of the state has the highest level?

Rep. Kelsb: Somewhere around Edgeley.

Chairman Rennerfeldt: Are there any questions?

(Rep. Ekstrom passes around a map of the state wind classifications.)

Ekstrom: The reason the study is so essential, is the study was done a few years ago and we need to find where those sites are. The other relationship you have to understand is not only the potential for wind energy at that site, but also access to transmission lines.

Rep. Klein: How many are you thinking about putting together in one place?

Ekstrom: To give you an idea, the NSP site presently in Minnesota has 100 machines. The one on the Pemina escarpment will be 75 machines at this point. A machine rated at 1.5 megawatts is about 1.5 million dollars.

Vice Chair Nelson: Two of the problems I see with wind energy development is certainly the capacity of the transmission line and how that affects where the power is going and the other issue I would like someone to explain is the pricing structure. How this power is purchased and how that relates to existing power.

Ekstrom: First about the transmission. It is a problem, we have started talking about it. It is something we have to address. There is more money from developers of wind energy that would help us build these lines. Their problem is access to land and easements. Having to do with pricing structure. I can tell you what the production cost is -- we are about at 4-1/2 cents per

kilowatt hour for wind energy. It is still an expensive way to produce energy. However, the price is dropping. That is why we are seeing green pricing structures. The Moorhead plant had subscribers buy into the green pricing structure. 400 people came together and agreed to pay an extra \$5 per month for three years. That allowed that entity to build that structure. There is a consumer demand for green energy and that is one of the ways it is being marketed.

Vice Chair Nelson: Do you have a time table - getting back to the transmission capacity situation in your meetings as to what is the time table for some steps that will move towards a solution to that problem?

Ekstrom: Those meetings are starting this month. We are looking at easements along the WAPA lines. Underground lines would be cost prohibitive. We want to do this in partnership with the coal fired industry because they have the same problems?

Rep. Nottestad: When you are talking about the use of public lands for these, what type of public lands are you talking about, are you talking about wind farms, or intermediate placement? I do know this that Federal Wildlife wouldn't consider as far as the water fowl deal.

Ekstrom: We have had discussion with the wildlife and CRP lands and I would rather Rep. Kelsh answer that questions. In terms of bird kill, which has always been the issue. The towers we are now using are solid core towers, not the lattice ones. What they found that raptors will perch on those lattice type towers and because you keep the land around those fairly cleared, you can imagine what happens to the rodents, they raptors come down after their food source. Because we have solid towers, we don't have that perching ability. The new machines are very, very large and the blades move very slowly. We are not finding it is a problem.

Rep. Nottestad: Back to one thing you said, you talked about the different CRP ...

Ekstrom: In terms of public land, California is looking for state lands as possible sites for towers. I think it is something we have to look at. I would rather see these on private lands because of the wind rights. What we found is if an owner would allow a developer to put a tower on his land, he still has access to farming or ranching on that land. In addition he is looking at anywhere from \$2,000 to \$3,500 per year per machine for a 32 year period. So in terms of putting a base under our ag producers in our state, it has real benefits for those folks.

Rep. Pam Gulleason - Dist. 65: I just wanted to stop in and show my support for this study.

Harlan Fuglesten - ND Association of REC's: Two years ago this resolution was here and we took no position on it. During the last couple of years we have seen tremendous growth and interest in wind energy. Many of our coops have cosponsored the meetings going on in respect to wind energy. We are all learning about it. We in the cooperatives have invested about 90% of all coal based energy in North Dakota, but we think wind energy will also have a place here in the state. I noticed just yesterday that Cass County Electric had an article about wind power in North Dakota. I just wanted the committee to know that some of our cooperatives are bring the option of wind energy to their customers.

Rep. Keiser: As you said, the industry is already studying the feasibility of this, what role does the government have in this? What do you see us adding to what you are already doing?

Fuglesten: Certainly there has been a tremendous amount of interest, it is up to the committee to determine whether or not there is a state role to play. I would think that maybe there are some issues that the state would like to lend a hand or understand what is happening out there. We know one of the big problems we face in North Dakota as far as future energy development is the transmission line constraint. If the state wants a role in trying to deal with that issue, it maybe appropriate for the state to be a part of that.

Chairman Rennerfeldt: At the present time it is not feasible because of the cost. How far does it have to come down to beat the coal generated energy?

Fuglesten: I don't profess to be an expert but I understand the costs have gone down substantially in the last 10 years. The technology has improved, but wind energy does not stand now on the same economic footing as coal based generation. That is in fact due to our very efficient coal based industry with very low costs. The other part of the equation is that no matter how efficient wind energy may get, it still only operates when the wind blows, you need to have a dispatch-able energy to back it up. You still have to have the commitment to a firm base of power.

Chairman Rennerfeldt: Wouldn't you eventually have to establish a reserve, or battery system, where you could hold some of that power in reserve?

Fuglesten: That goes well beyond my understanding. As I understand right now, there is no way to store that power.

Rep. Keiser: When they have been developing the costs of wind versus coal or hydro, have they included in that cost of generation, any kind of production taxes or revenues coming back to the state?

Fuglesten: I am not quite sure that I can answer that.

Rep. Nottestad: You spoke about the REC's being interested in going into wind energy. In what way? Are they looking at selling green power like Moorhead did, or just going into it and spreading the excess cost to all members? What way are you looking at.

Fuglesten: For example, in your area, Minnkota Power Cooperative and one of their members are involved in Integrity Wind Energy Program. Cass County Electric is interested in building their own turbine. The purpose of that would be to make it available to consumers at the cost of the

wind energy which is still a premium cost. So the idea would be similar to what is being done by Moorhead Public Service which would be a premium cost and consumers could buy for example a 100 kilowatt hours per month. It would not be spread out.

Chairman Rennerfeldt: Any further questions of the committee? Anyone else care to testify in favor.

Rep. Kelsh: I wasn't going to testify on this resolution, but I thought I would address some of the questions that came up. With regard to storage of electricity, there is no technology or economically feasible way to store electricity, because we haven't had to. So whatever is produced goes out on the lines and if it is used, that's where it ends. There is some technology for a spring type mechanism, but it is quite a few years off. Regarding the cost production versus coal, there are several factors - first of all wind energy is modular so if you put up one machine you are bringing in a bunch of equipment and that increases the cost. If you are building a large facility with several towers you are taking advantage of that crane to build several towers at once. With regard to the needs of Fish and Wildlife and public lands, Mike Macinrow did make an announcement that they will allow single turbines to be constructed on their easements within a certain restriction. With that I would ask for your support of this resolution.

Chairman Rennerfeldt: Any other questions from the committee? Anyone else care to testify in favor of this resolution? Anyone opposed? If not, I will close the hearing on HCR 3026.

COMMITTEE WORK

Rep. DeKrey: I move a Do Pass.

Rep. Droydal: I second.

Rep. Droydal: Wind energy is something I have kept track of since the early eighties. It is something I think would be good thing for us to get ready for it. I am disappointed in the fact that

there wasn't a balanced sponsorship. When I look at the sponsors on this, it is strictly a political statement. Unfortunately this is a really bad issue for someone to take a political statement on. It is a good issue, and it's going to pass, but not because the Democrats sponsored it.

Chairman Rennerfeldt: I have a problem with it because they mentioned Minot, Grand Forks, Fargo and not anyone else. I wonder if that should be amended out of there. I would offer that amendment.

Rep. DeKrey: I withdraw my Do Pass.

Rep. Droydal: Can I ask a question of Rep. Kelsh. Isn't everyone in North Dakota within 50 miles of a Class 5 zone?

Rep. Kelsh: Yes, that is correct.

Rep. Droydal: I withdraw my second.

Rep. Winrich: I move we delete lines 13 and 14.

Rep. Klein: I second that.

Chairman Rennerfeldt: All in favor of the amendments signify by saying Aye. Opposed?
Amendment carries.

Rep. DeKrey: I move a Do Pass as Amended.

Rep. Droydal: I second that.

Chairman Rennerfeldt: Any further discussion? If not, all those in favor of HCR 3026 as amended signify by saying Aye. Opposed?

MOTION FOR A DO PASS AS AMENDED

YES, 14 NO, 0

CARRIED BY REP. KELSH

Date: 2/15/01
Roll Call Vote #: 1

2001 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. HCR 3026

House Natural Resources Committee

Subcommittee on _____

or

Conference Committee

Legislative Council Amendment Number _____

Action Taken DO PASS

Motion Made By Rep. ReRny Seconded By Rep. Drovdal

Withdrawn

Representatives	Yes	No	Representatives	Yes	No
Earl Rennerfeldt - Chairman			Lyle Hanson		
Jon O. Nelson - Vice Chairman			Scot Kelsh		
Curtis E. Brekke			Lonnie B. Winrich		
Duane DeKrey			Dorvan Solberg		
David Drovdal					
Pat Galvin					
George Keiser					
Frank Klein					
Darrell D. Nottestad					
Todd Porter					
Dave Weiler					

Total (Yes) _____ No _____

Absent _____

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

13062.0101
Title.0200

Adopted by the Natural Resources
Committee
February 15, 2001

VR
2/15/01

HOUSE AMENDMENTS TO HCR 3026
Page 1, remove lines 13 and 14

HOUSE NATURAL RESOURCES

02/16/01

Renumber accordingly

Date:
Roll Call Vote #: 1

2001 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. HCR 3026

House Natural Resources Committee

Subcommittee on _____
or
 Conference Committee

Legislative Council Amendment Number _____

Action Taken DO PASS AS AMENDED

Motion Made By Rep. DeKrey Seconded By Rep. Drovdal

Representatives	Yes	No	Representatives	Yes	No
Earl Rennerfeldt - Chairman			Lyle Hanson		
Jon O. Nelson - Vice Chairman			Scot Kelsh		
Curtis E. Brekke			Lonnie B. Winrich		
Duane DeKrey			Dorvan Solberg		
David Drovdal					
Pat Galvin					
George Keiser					
Frank Klein					
Darrell D. Nottestad					
Todd Porter					
Dave Weiler					

Total (Yes) 14 No _____

Absent 1

Floor Assignment Rep. Kelsh

If the vote is on an amendment, briefly indicate intent:

VOICE VOTE

REPORT OF STANDING COMMITTEE (410)
February 16, 2001 8:52 a.m.

Module No: HR-29-3620
Carrier: S. Kelsh
Insert LC: 13062.0101 Title: .0200

REPORT OF STANDING COMMITTEE

HCR 3026: Natural Resources Committee (Rep. Rennerfeldt, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (14 YEAS, 0 NAYS, 1 ABSENT AND NOT VOTING). HCR 3026 was placed on the Sixth order on the calendar.

Page 1, remove lines 13 and 14

Renumber accordingly

2001 SENATE NATURAL RESOURCES

HCR 3026

2001 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. HCR 3026

Senate Natural Resources Committee

Conference Committee

Hearing Date 3-9-01

Tape Number	Side A	Side B	Meter #
1		X	44.2 - end
2	X		Start - 31.1
3-22-01 1		X	9.7 - 18.1
Committee Clerk Signature <i>Jarvis James</i>			

Minutes:

SENATOR FISCHER opened the hearing on HCR 3026.

REPRESENTATIVE MARY EKSTROM of District 11 cosponsor of HCR 3026 introduced the RESOLUTION URGING THE CORPS OF ENGINEERS TO PROMOTE PRIVATE ACCESS TO, PROVIDE OWNERSHIP OF, AND PRIVATE DEVELOPMENT ON LANDS IT OWNS AND MANAGES AROUND LAKE SAKAKAWEA. (See attached testimony). A map of the Wind Vane was also presented (See attached).

SENATOR TRAYNOR asked about the technology advances of electricity storage.

REPRESENTATIVE EKSTROM answered that of course electricity can not be stored but there are developments like storage in compressed gases.

SENATOR CHRISTMANN stated since North Dakota produces more power than the state needs now and with the added wind generated power how would the power be exported.

REPRESENTATIVE EKSTROM is meeting with multiple developers to export the power generated not only from the wind but the lignite industry also. The big problem is the access to land for the towers.

SENATOR TOLLEFSON asked about the technology advances in wind energy.

REPRESENTATIVE EKSTROM stated many changes have been made. The towers are now much higher with the blades similar to a DC10 airplane and the cost production is 85% efficient with a life span of the machines of 30 years.

SENATOR CHRISTMANN complimented Rep. Ekstrom on how well prepared research she presented so much so as to why a study is needed.

REPRESENTATIVE EKSTROM stated that the public wheel needed to be studied, as what will be the economic effect for the state in the long run. Lets do it right and protect the farmers and ranchers.

REPRESENTATIVE PAM GULLESON of District 26 cosponsor of HCR 3026 testified about the excitement of the wind energy concept. She supports the study because alot of questions need to answered and with the interest of these companies to invest in the industry we need to protect all the interests of the state.

ANDY MORK, of Mandan, ND testified in support of HCR 3026. He stated several points as to the abundant wind as a clean source of energy. The problem of course that wind doesn't blow all of the time and the energy can't be stored. The back up of the hydro or coal burning energy producing cannot be shut on and off with a switch.

DENVER ROSEBURY testified in support of HCR 3026. He stated that 43% of all power in America could be produced in North Dakota. He gave several statistics of invest credit and other numbers.

There was no neutral or opposing testimony on HCR 3026.

SENATOR FISCHER closed the hearing on HCR 3026.

SENATOR KELSH made a motion for a "DO PASS" of HCR 3026.

SENATOR EVERY second the motion.

SENATOR FREBORG asked to hold over the vote because of some research.

SENATOR KELSH withdrew his motion.

MARCH 22, 2001

SENATOR FISCHER reopened the discussion on HCR 3026.

SENATOR CHRISTMANN reminded the Committee of the excellent preparation of the wind energy issue compared to last session and feels there isn't much left to study.

SENATOR KELSH felt there were still some very important issues left to study especially concerning transmission of the energy.

SENATOR TRAYNOR stated that if the resolution is not passed we will be sending a bad message.

SENATOR CHRISTMANN concern that the momentum for the wind energy development might slack off if they rely on the legislature will take over because of the study.

SENATOR TRAYNOR made a motion for "DO PASS on the Consent Calendar" of HCR 3026.

SENATOR EVERY second the motion.

SENATOR FISCHER called for the roll vote of HCR 3026 indicating 7 YAYS, 0 NAYS, AND 0 ABSENT OR NOT VOTING.

SENATOR KELSH will carry HCR 3026.

REPORT OF STANDING COMMITTEE (410)
March 22, 2001 11:26 a.m.

Module No: SR-50-6391
Carrier: Kelsh
Insert LC: . Title: .

REPORT OF STANDING COMMITTEE

HCR 3026, as engrossed: Natural Resources Committee (Sen. Fischer, Chairman)
recommends **DO PASS** and **BE PLACED ON THE CONSENT CALENDAR** (7 YEAS,
0 NAYS, 0 ABSENT AND NOT VOTING). Engrossed HCR 3026 was placed on the
Tenth order on the calendar.

2001 TESTIMONY

HCR 3026

HCR 3026 / WIND ENERGY STUDY RESOLUTION
February 15, 2001 / House Natural Resources Committee
Prepared by: Mary Ekstrom

Good Morning Mr. Chairman and members of the Natural Resources Committee. For the record my name is Mary Ekstrom. I am a Representative for District 11 in Fargo.

What a difference a day makes. In this case it has actually been two years since I stood before the House Natural Resources Committee to discuss a Wind Energy Study Resolution.

In the past two years we have seen the release of a Request for Proposal from X-Cel Energy for a wind farm at Cooperstown. We expect to hear shortly whether they have been successful. If they are then a number of machines will be placed along the Pembina Escarpment, one of our prime wind sites.

ND SEED was also formed in the last two years. This coalition of groups has held a series of public forums around North Dakota to inform and educate our citizens about the benefits and opportunities of wind energy development.

As a board member of ND SEED (Sustainable Energy for Economic Development), I was pleasantly surprised to see the attendance of 150 people last summer in Edgeley at a public meeting. Just a few weeks ago, 500 people showed up for the Wind Energy Forum in Bismarck that was sponsored by the Department of Energy, Senator Byron Dorgan, the Division of Community Services, ND SEED, the Governor's office, and EERC.

There are wind energy developers who are evaluating sites all around North Dakota. And the REC's are looking at "Green Pricing" plans for their customers.

The purpose of HCR 3026 is to study and provide leadership and direction for the future development of wind energy in North Dakota. Wind energy is a partner with our traditional coal fired generating plants. As partners, we face many of the same problems. Additional transmission lines need to be built to transport electricity out of the state.

We also need to look at this new source of revenue for our farmers and ranchers and develop guidelines for contracts for "wind rights" just as we have contract guidelines for mineral rights presently.

The states surrounding North Dakota have already started this process. Minnesota, South Dakota, Wyoming, Nebraska and Iowa are all far along in developing wind energy in their respective states. Our advantage is that our wind energy potential is much greater. North Dakota is number one in the nation in wind energy resources - Texas is number two.

You need only watch the current news of the energy crisis in California to understand what a tremendous opportunity we lies before us. We passed House Bills 1221, 1222, and 1223 with near unanimous support. These tax measures level the playing field with regard to wind energy development.

But there is more to be done. I believe the Legislative Council needs to study further the state's role in this new industry. We can address the challenge of transmission and its impact on our state's electric industry. We can assess the economic development impact of wind energy development on our communities and our state. I respectfully request a DO PASS on this resolution

I will try to answer any questions you may have.

HCR 3026 / WIND ENERGY STUDY RESOLUTION
March 9, 2001 / Senate Natural Resources Committee
Prepared by: Mary Ekstrom

Good Morning Mr. Chairman and members of the Natural Resources Committee. For the record my name is Mary Ekstrom. I am a Representative for District 11 in Fargo.

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In the past two years we have seen the release of a Request for Proposal from X-Cel Energy for a wind farm at Cooperstown. We expect to hear shortly whether they have been successful. If they are then a number of machines will be placed along the Pembina Escarpment, one of our prime wind sites.

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THE WIND VANE

a quarterly newsletter by ND SEED
to keep ND headed into the wind



winter 2001

www.ndseed.org

Wind bills pass House, now face Senate scrutiny

The pro-wind energy legislation that SEED supports now moves to the Senate after receiving nearly unanimous support in the House.

On Wednesday, March 14th, HB (House Bill) 1221, HB 1222, and HB 1223 will be introduced in the Senate Finance and Taxation Committee. Showing support for the bills in committee will improve their chance of being passed by the Senate. If the Senators on the Committee decide to support the bills, they will recommend that the Senate "do pass" them.

To support wind energy, please contact your legislators. Find their email addresses at www.state.nd.us/lr/ or call toll free at 1-888-635-3447 to leave them a message.

SEED welcomes wind energy advocates to come and help support our bills by attending the hearing. The hearing will begin at 9:30 am. It will be held in the Haugland Room, on the first floor of the Capitol.

Contacting Senators via email, telephone calls or letters

will also make a difference.

North Dakota's wind advocates are concerned that wind energy developers will bypass North Dakota, despite our better wind resource, and build wind farms in Minnesota simply because offers developers lower taxes and other incentives.

"It is imperative that North Dakota pursue legislative action to level the playing field with adjacent states," says Keith Monson, Chairman of the Griggs/Steele Wind Development Group. "These bills will allow small towns like ours to develop our wind resource. Wind energy has the potential for being the single largest economic development effort this state has ever seen."

Under the current tax code, wind energy companies building a wind farm in North Dakota would have to pay two-and-a-half times as much in property taxes as they would have to pay for the same wind farm in Minnesota.

This tax inequity makes it difficult for communities like Cooperstown to win their 80-megawatt wind energy bid with Xcel Energy in Minnesota.

Dennis Anderson, chairman of the Coteau Hills Wind Development LLC, agrees. "We need a level playing field when it comes to taxes," he says. "With these tax changes, we could see twenty wind turbines go up in the next year. Over five to seven years, we could see one thousand turbines at \$1 million each. That's a billion dollars. But without these bills, it's not going to happen."

HB 1221 exempts wind energy equipment from sales and use taxes.

HB 1222 reduces the valuation of wind farms, the taxes from which would be centrally assessed, to a level comparable to the taxation on similarly sized coal-fired power plants.

HB 1223 expands an existing state income tax credit to wind energy turbines that are installed on leased land.

Moorhead to build 2nd turbine

Already a local leader in utility-scale wind energy, Moorhead Public Service is now receiving national recognition for the success of its wind energy program. In less than four weeks, Moorhead Public Service signed up an additional 400 customers to its Capture the Wind(tm) program. Now over 7% of its customers are getting some of their energy from the wind, the highest wind energy participation rate of any municipal utility in the country.

Chris Reed, Energy Services and Marketing Director for Moorhead Public Service, thinks some of the success of their wind energy program can be attributed to the sense of stewardship on which it is based. "We believe in environmental stewardship," Reed says. "We think that's part of being a community member. And we think our wind energy program is part of that."

Installation of Moorhead's second turbine is expected to begin this spring. Like Moorhead's first turbine, its second will be rated to produce between 600-850 kilowatts of electricity.

Top 5 states for wind energy potential	
States	billions of kilowatt hrs.
North Dakota	1,210
Texas	1,190
Kansas	1,070
South Dakota	1,030
Montana	1,020

SEED's 2nd annual conference a success

500 people attended SEED's second annual wind energy conference in Bismarck. The farmers and landowners who attended were "knocking down the doors," as the Bismarck Tribune put it, "to learn more about wind."

Farmers heard how wind energy could be a new source of farm income, jobs and economic development. However, the overflowing audience also heard panelists explain why North Dakota will have to lower its taxes on wind energy now and eventually build more power lines if we want to harvest this new crop and get it to market.

The conference was held on January 10th to build momentum for SEED's wind energy bills at the start of the legislative session (see story).

Senator Dorgan and the Energy and Environmental Research Center in Grand Forks co-sponsored the conference.

After the conference, a legislative social was held to discuss SEED's wind energy bills with legislators.

Marjorie Stalcup attended to learn how she might be able to get wind turbines on her land near Lisbon. "There was so much information given," she said, "that it would have been impossible to gain the knowledge without attending."

"No different than a rock pile"

That's how Jack Delaney, a farmer in southwestern Minnesota, describes what it's like farming around the wind turbines in his fields. For the last two years, Jack has been farming and living with four large wind turbines.

The closest turbine is less than 1,000 feet from his house, but Jack says, "they don't bother me." Its noise level, he says, "is no different than a tractor out in the field."

Jack's farm, located on the Buffalo Ridge near Lake Benton, is in the heart of Minnesota's large wind farms. From his land, Jack can see fifteen wind turbines.

When asked whether he'd recommend that other farmers lease their land for wind turbines, Jack says, "If they want some income, they're alright."

Like what you see?

This is the first edition of our newsletter.

You have been sent a copy either because you are a member already or because we thought you might want to become one.

To receive our newsletter in the future, join ND SEED today! Members also receive updates on our meetings, our legislation, and whatever else is in the wind.

If you are interested in becoming a member, please send \$30 to ORC, SEED Project, PO Box 1095, Dickinson, ND 58602. ND SEED members become members of both Dakota Resource Council and Clean Water Action—a two for one deal!

Join our growing grass-roots movement to harvest ND's top crop of wind!

"Learn from mistakes MN made"

That's the advice that Lake Benton, MN farmer Conrad Schardin has for ND farmers. Schardin is happy with the money wind energy has meant to him and his neighbors, but he says farmers should work together so that wind development companies cannot negotiate individually with farmers.

"If you can get some kind of leader to get the farmers organized, the wind developers could not play one farmer off another," Schardin says. This became an issue with Schardin and his SW MN neighbors around wind royalties and leases.

Schardin also recommends tubular towers over lattice towers, which take up more land and allow ice buildup.

Overall, Schardin thinks wind energy "is very compatible with farming. There's a lot more benefits than negatives." Schardin notes that two neighbor kids, who work maintaining turbines for \$14-15 an hour plus benefits, "are now driving around in new vehicles."

Published winter, spring, summer and fall, THE WIND VANE is a service to ND SEED members and friends.

www.ndseed.org

Many rural electric co-ops are now offering their customers the opportunity to purchase wind energy. For a few dollars extra a month, customers whose rural electric coops are participating will be able to directly support the development of wind energy.

Through Cass County Electric's *Infinity Wind Energy* program, for instance, customers can buy 100 kWh of wind energy a month for \$3.

To date, Verendrye, Cass County, Capital Electric, Dakota Valley, West Plains, and Mountrail-Williams Coops have announced that they will provide wind energy to their customers.

Cass County Electric plans to build a wind turbine in their service area.

Both Minnkota and Basin Electric Coops, which generate and transmit power to distribution coops, are offering their member distribution coops the opportunity to buy wind energy from their wind turbines. Minnkota will install its turbine in Minnesota, while Basin will install its turbines in South Dakota.

If interested, contact your local REC.

Keith Monson knows how much work it takes to plan a wind farm. As the Chairman of the Griggs/Steele Wind Development Group, he actually added up how many hours it took he and three others to plan the proposed Cooperstown wind farm. All the steps took 1,000 hours. And that was in just the first year.

With wind consultant and engineer Jay Haley of EAPC Architects Engineers, Keith and his group submitted a bid for an 80 megawatt wind energy contract with Xcel Energy in Minnesota.

Keith described several steps he and his group took in preparing their project. The first was to attend conferences, in Iowa and Grand Forks, where they "interviewed" wind developers. They then formed a limited liability corporation to "deal with nothing but wind." After researching how developers in other states negotiated individually with farmers, Keith's group decided to jointly negotiate options and lease agreements, which will go into effect if they are awarded the contract with Xcel.

They are waiting to hear if their project made Xcel's short list, which will be announced when the Western Area Power Administration completes its transmission capacity studies.

There's a wealth of wind energy info available. Here's a few of our favorites. If you have others, let me know (benlarsen@i29.net).

•ND SEED's own website is now up at ndseed.org!

•A wind energy map of North Dakota can be found at nrel.gov/wind

•The Landowner's Guide to Wind Energy, a fifty-page resource with information on the economic and legal issues related to wind energy leases, is available from Isaac Walton League 612-922-1608.

•The American Wind Energy Association has a website at awea.org. AWEA also makes their Wind Energy Weeklies, a nationwide review of current wind energy developments, available free via email. (See archived Weeklies at awea.org.) Get on the listserve by sending an email request to: tomgray@econet.org

•Minnesotans for an Energy Efficient Economy has a website at me3.org

•Windustry has a website (windustry.org) and a newsletter (800-356-5441).

About ND SEED:

ND SEED (Sustainable Energy for Economic Development) was formed in 1999 as a joint project of Dakota Resource Council and Clean Water Action. Our coalition now includes many organizations and individuals.

Clean Water Action

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SEED elects Executive Board

ND SEED elected new Executive Board members at its first annual meeting on January 9, 2001 in Bismarck.

The new SEED Executive Board will include Jay Haley of EAPC Architects Engineers in Grand Forks, Richard Schlosser of the Edgeley Wind Energy Development Group, Keith Monson of Cooperstown, Jim Heckman of the Three Affiliated Tribes in New Town, Chris Reed of Moorhead, Lorraine Dopson of the Dakota Resource Council Board in Bismarck, and Gerald Rolse of the Mountrail County Wind Development Group.

DRC wishes to thank departing SEED Board Members who did such a good job in getting the SEED project going, including Don Vig of Valley City, Sister Celine of Fargo, Eric Clausen of Minot, and Mary Eckstrom of Fargo.

www.ndseed.org

Over 1,000 attend wind meetings

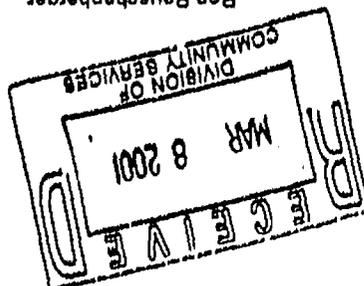
Over 1,000 people came to our meetings in the last year. Held in city halls, bars, extension centers, and hotels, our "landowner meetings" focus on the economic development potential of wind energy. So far, we've sponsored meetings in Kindred, Edgeley, Killdeer, Stanley, Minot, Crosby, Hazen and Dickinson.

By coming to our meetings, farmers and local citizens demonstrated the broad support behind wind energy in ND.

SEED thanks those who helped plan the meetings, including DRC's chapters in Dunn County, Badlands Area and the Sours Valley; Jim Heckman and other Stanley residents; Cecile Werhman in Crosby; and the many rural electric cooperatives who helped promote and/or sponsor our meetings.

SEED also thanks Jay Haley, EAPC Architects Engineers, for sharing his expertise at our meetings, and Kim Christenson, Energy Program Manager of the Division of Community Services, for providing valuable information at our meetings.

Ron Rauschenberger
14th Floor - State Capitol
600 East Boulevard Avenue
Bismarck, ND
58505



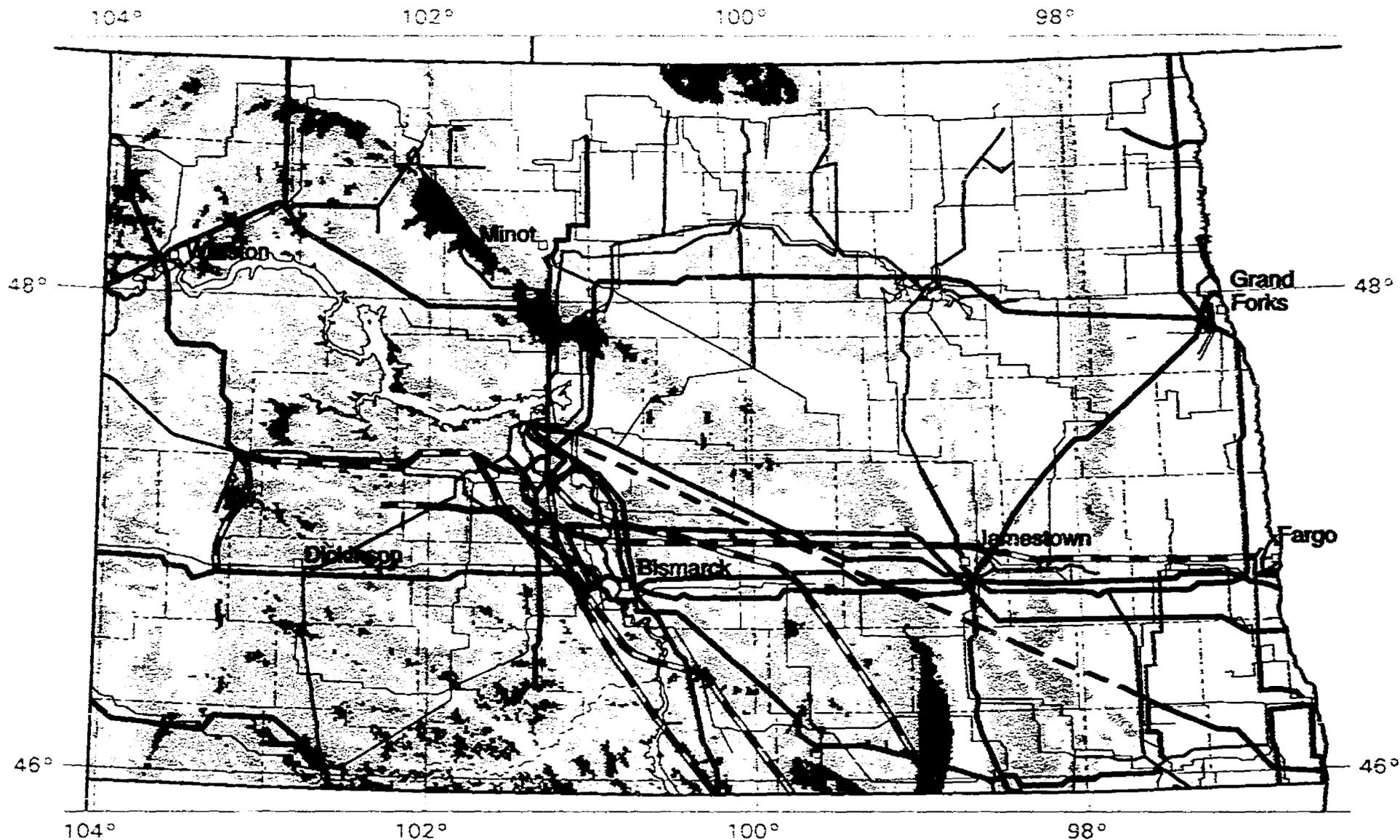
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THE WIND VANE
a quarterly newsletter by ND SEED
to keep ND headed into the wind
To contact SEED, see back page.



THE WIND VANE is mailed from:
Dakota Resource Council
PO BOX 1095
Dickinson, ND 58601

North Dakota - Wind Resource Map



Wind Power Classification

Wind Power Class	Resource Potential	Wind Power Density at 50 m W/m^2	Wind Speed ^a at 50 m m/s	Wind Speed ^a at 50 m mph
2	Marginal	200 - 300	5.6 - 6.4	12.5 - 14.3
3	Fair	300 - 400	6.4 - 7.0	14.3 - 15.7
4	Good	400 - 500	7.0 - 7.5	15.7 - 16.8
5	Excellent	500 - 600	7.5 - 8.0	16.8 - 17.9
6	Outstanding	600 - 800	8.0 - 8.8	17.9 - 19.7

^a Wind speeds are based on a Weibull k value of 2.0

Transmission Line Voltage

- 69 Kilovolts
- 115 Kilovolts
- 230 Kilovolts
- 345 Kilovolts
- Under Construction

U.S. Department of Energy
National Renewable Energy Laboratory

