

# MICROFILM DIVIDER

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ROLL NUMBER

DESCRIPTION

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10/21/03  
Date

2003 SENATE APPROPRIATIONS

SB 2244

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10/21/03  
Date

2003 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB 2244

Senate Appropriations Committee

☐ Conference Committee

Hearing Date January 28, 2003

Tape Number	Side A	Side B	Meter #
#1	x		75-4500 75
Committee Clerk Signature <i>Jan Hindrickson</i>			

Minutes:

Senator Holmberg, chair, called the meeting to order with all members present.

Hearing on SB 2244 was opened (#80)

Senator Erbele, Senator from District 28 which includes Emmons, McIntosh, Logan and the west half of Lamoure and Dickey counties, spoke about the bills that were passed the last session relating to wind energy that gave them some tax credits and some incentives to come to North Dakota. This summer there will be \$85 million dollars worth of construction in wind turbines going on in District 28 and the Edgley, Kulm area. An idea came from these wind turbines that would benefit education by owning and building an wind turbine and using that to defray some of the energy costs. This bill would allow schools to form partnerships, bonding authority that they can raise some tax free bonds to build wind turbines. They could form consortiums, to an outside location and as long as they were in the same service area, such as MDU or Excel, etc., then they could join together and build a tower. It is projected that these towers would pay for

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10/21/03  
Date

Page 2

Senate Appropriations Committee

Bill/Resolution Number SB 2244

Hearing Date January 28, 2003

themselves in a period of 7-10 years, depending on the number of schools that would be involved and the output of that turbine. There would be considerable savings to those districts in the form of their energy savings. This is happening already in Iowa, a number of school districts already doing this and they are having great success, so some of these is patterned after Iowa, but some things have had to be changed to work for North Dakota. Section 8 of the bill concerns net metering, but what to do with the excess power was not addressed, however a proposed amendment has been written and is attached (Exhibit 1). Section 12 & 13 will need some work because it has a high fiscal impact, maybe there were other ways that this can be addressed. Senator Erbele urged the committee to give this bill do consideration. He felt this was an exciting thing for all of North Dakota, not just his District.

Representative David Monson, from District 10, Northeast part of North Dakota.(#421) He was in favor of SB 2244 with some changes. He stated that he is a school administrator and he believes in wind power and he lives in an area that there is nothing to stop the wind from the Arctic Circle. He felt that this would be a boom for North Dakota schools. He also felt that this bill would move the state in the right direction.

Senator Holmberg, chair stated that the committee would hear the bill today, and it would be heard with the PSC subcommittee. (#562)

Mike Brandenburg, Edgely.(#602). He stated that he never dreamed that by passing the bill for wind energy last session would be as successful as it is right now. Section 12 & 13 of the bill are two sections that were thought of as funding mechanisms, not realizing the full impact of what it might do to the bill. In visiting with some of the utilities, it was learned that it would form some hardships to them. He would like to take those two sections out, after talking to the sponsor of

Deanna Waller  
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10/21/03  
Date

Page 3

Senate Appropriations Committee

Bill/Resolution Number SB 2244

Hearing Date January 28, 2003

the bill. He wanted to get back to what they would actually be doing and that would be net metering. He spoke about why wind energy was happening in North Dakota, and his perception of what he sees, and why is the power and light coming from North Dakota, it is because of transmission. This is where North Dakota is in a win, win situation because for 25 years, North Dakota has been trying to build major new transmission and has not be able to do it. The last major transmission line that he was aware of was built in 1970 or 1979. He has attended many meeting in Minneapolis dealing with transmission issues and the environmentalist (#737) is the reason that we can't get any new transmission lines. (#747) "They" said that if you put wind on your system, the environmentalist will work with you. He talked about the environmentalist and their concerns. He talked about the idea that is in Iowa, schools going out and putting up a wind turbine, Putting up one for a small school is just not feasible, but if you if you form a consortium of a number of school (5 or 6) then it becomes feasible. He stated that you don't want to overbuild turbines, because the net metering only results in the power the schools have used. 20 years from now, Mr. Brandenburg felt that the state would not have as many schools as they do now. Another questions raised was how do we keep our kids in North Dakota after they graduate from school. Another speaker will speak on how Iowa are involving the kids in the wind energy, (when Mr. Brandenburg talks of wind energy he is including coal, coal and wind have to work together, he states (#935).

Senator Andrist (#979): Would the removal of Sections 12 & 13 remove the fiscal note?

Answer (Mike Brandenburg): He felt that it would. He felt the only issue to be resolved was the net metering.

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10/21/03  
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Page 4  
Senate Appropriations Committee  
Bill/Resolution Number SB 2244  
Hearing Date January 28, 2003

Senator Andrist also wanted to know if this bill had been heard in the Education committee, and Mr. Brandenburg stated that this was the first committee to hear this bill and since this bill had over \$50,000 fiscal note it came directly to appropriations.. Senator Andrist continued (#1032). He wanted to know if this would preclude a school from bonding for a wind turbine and resell some of the energy to neighboring facilities? Answer: (Mike Brandenburg) The design of this bill is to have the schools net metering for the energy they use. He felt that the utility companies would be hurt some, but the publicity that would be generated would be invaluable to the utility companies. Senator Christmann: (#1113) Do the utility companies know that you can't pay enough for that kind of publicity? Answer (Mike B.) It is all a matter of education. A few years ago, he felt that people were nuts talking about wind energy but now he is here testify in favor of wind energy, schools forming consortiums, being able to put up turbines and educating our young about wind energy so that we can export both wind and coal out of the state. There are some utility companies that are not onboard, but it is working in other states, and it is a matter of education.

Others who testified but did not have written testimony or sign in on the registration:

(#1222) Dennis Anderson, Edgely. He stated that smaller schools need to band together to make this work, while the bigger schools could probably do this on their own, but it would work with any size. The next problem would be remote siteing (#1331). In some situations, you can put a turbine right by your service, but if you are going to have some small schools going together then you have to have remote siteing, but North Dakota law does not allow that remote siteing, so that would mean you have to have the schools come together, have remote siteing, and have net metering. (#1365) Net metering is you take these one school or five schools that band together

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10/21/03  
Date

Page 5  
Senate Appropriations Committee  
Bill/Resolution Number SB 2244  
Hearing Date January 28, 2003

and spin their meters backwards, if you will, gather the meter readings at the end of the month and the offset. The only way this works is you get paid retail rate for the power. Mr. Anderson gave out Exhibit #2 which is titled "THE SCORE". This includes articles on Iowa and how they started their wind turbines, etc. He felt that after the turbines were paid for, there would be approximately \$100 million dollars not written to the utilities companies, but could be used in the schools to buy books, pay teachers, etc., that that is over a 20 year period.. In Iowa, they are implementing the turbines into their curriculum physics, math, etc. When they solve the transmission problem in North Dakota, there is going to be more wind energy, could be several billion dollars of wind energy in North Dakota, isn't that a good way to keep kids in North Dakota. Let's get the 3rd & 4th graders learning a little about the turbine, put a computer in the school how much their turbine generated that day and how much money they saved. In High school they get the physics class, maybe some electrical engineers come out of that, maybe they go to work for the coal companies, we have to have to have electricians and engineers. Iowa borrows the money at % interest to build their turbines, Mr. Anderson has talked to bankers that would buy tax free bonds.

Questions: (#2235)

Senator Christmann: When the coal powered plants supply to a school, they pretty much have their power sold, not too many of them would be operating at 1/2 volume or anything like that. With this net metering, they need to buy your power (the wind power) even though they are producing enough power to meet the needs of their customers. But they are going to be forced to buy more? Answer: Mr. Anderson: That is right. Senator Christmann continued: (#2310)

During the time when the wind is blowing and the school is using this power, they are just

Page 6  
Senate Appropriations Committee  
Bill/Resolution Number SB 2244  
Hearing Date January 28, 2003

producing power for free and wasting it, because it can't be stored, can't be sold to any other customers. You have to duplicate this power just in case. Answer: Mr. Anderson stated this is true.

Other testifiers:

Tom Louik (?) (#2620) Economic Development coordinator for Wishek, and for the McIntosh County Wind Energy committee. No written testimony. In support of SB 2244. The group they formed (McIntosh County Wind Energy committee) has banded together to support this bill and the wind energy for the schools. Would like the legislature to support this bill.

Senator Holmberg asked if there were any more testimony in favor, or against or just comments. (#2991) John Dwyer, President of Lignite Energy Council. No written testimony.

With the elimination of Section 12, it would have had a \$1.8 million dollar fiscal impact on the utilities that provide energy. He was disappointed, not that he is opposed with wind energy, he feels that wind energy on a voluntary basis is fine, but this was cross the line. This is wind energy on a mandated basis. There are about 9 different "shall's", he felt they were creating a market by mandate. 90% of electricity in North Dakota is supplied by coal based generating plants. Iowa & Minnesota do not mine one ton of coal. The Lignite Council is opposed to mandating wind energy. He also commented on the net metering on Page 2 of the bill. He was against the net metering. Mr. Dwyer was also concerned about page 2 line 21, concerning remote locations. He felt that Section 12 & 13 (he said 19 but there is no 19 in the bill #3347) and all of the shall's and the mandates should be taken out of the bill, he would be happy to work with the subcommittee. He stated that the Council felt that mandating a market is totally inappropriate and going on record as opposed to that. The council does not have a problem with wind energy



Page 7  
Senate Appropriations Committee  
Bill/Resolution Number SB 2244  
Hearing Date January 28, 2003

on a voluntary basis. He wanted to know if the state really wanted to mandate wind energy when about 90% of electricity in this state is coal based, about 18,000 jobs are generated by the coal industry and \$65 million dollars a year in annual tax revenue and \$1.5 billion dollars in gross business volume.

Questions: (#3480)

Senator Mathern: Since your council does support wind energy, if this could be brought to that level that your industry would support, where would that wind energy should be used? Is there a certain sector of our economy that should be the consumer of the wind energy? And what sector should that be? Answer: (Mr. Dwyer) We would support it on a voluntary basis, we disagree when you mandate it, which is what is being done in this bill, which we feel is totally inappropriate. The council is not against wind energy, this country needs all forms of energy.

When you start mandating markets that is when you cross the line as far as the Lignite Industry is concerned. We don't have a problem with it on a voluntary basis. Senator Andrist (#3886): If the utilities or coop's were interested in doing this on a voluntary basis, and were given more latitude to negotiate the contract, would this remove the objections to the Lignite council and do you think it would be a feasible concept? Answer: That is the primary objection, the net metering we are completely against, but if you want to encourage use of wind turbines, voluntary basis, we don't have any trouble with that. Senator Tallackson (#4113) Very proud of the Northeast where the school district in Grafton constructed wind turbine for their own use, community helped construct it, and that is supplying electricity to the school when the wind blows and the excess is used by the city. This all done on a voluntary basis, and a community effort.

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10/21/03  
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Page 8  
Senate Appropriations Committee  
Bill/Resolution Number SB 2244  
Hearing Date January 28, 2003

(#4295) Dale ( can't understand last name and he didn't sign the registration form nor did he give written testimony), represents Basin Electric Power Cooperative. From the original bill, we were opposed to the costs involved and the net metering, based on what we have heard this morning, pulling the costs out and the net metering seems to be two different things, we would be more than willing to help on that. We would be happy to work with the schools on the wind energy. With no more testimony, the hearing on SB 224 was closed. The subcommittee will be looking at this. (#4472).

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# 2003 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB 2244 Votes

Senate Appropriations Committee

☐ Conference Committee

Hearing Date Feb. 17, 2003

Tape Number	Side A	Side B	Meter #
#2	x		4,672-end
#2		x	0-954
Committee Clerk Signature <i>Jan Klenduckin</i>			

Minutes:

**Senator Holmberg** stated that SB 2244 would be voted on next. **Senator Christmann** and **Senator Mathern** both have amendments for this bill. This bill relates to wind energy for the schools. **Senator Mathern** gave out his amendments to the bill, and explained them. They are attached. **Senator Mathern** said they would allow schools to put together some joint power agreements that would be totally voluntary and there would be no requirements on the part of the power companies and whether this group of schools worked with a REA or a other utility they would have to come up with some kind of agreement with them on how to do that. Basically it says school districts can work together on wind energy if they can voluntary arrangement to make that work with the power company. **Senator Mathern** moved to have those amendments added to SB 2244, seconded by **Senator Krauter**. **Senator Christmann** stated his amendments would do the same things, plus some more. He wondered if he should vote for this amendment because he wants some of the same amendments as **Senator Mathern** and then present this amendment

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10/21/03  
Date

Page 2

Senate Appropriations Committee  
Bill/Resolution Number SB 2244 Votes  
Hearing Date Feb. 17, 2003

to eliminate the rest, or would it be outdated. **Senator Holmberg** stated that the council would fit the amendments together in the bill. The Legislative council representative stated that if both amendments passed then the council would work both of them into the bill. **Voice vote on amendments labeled .0303. Motion carried.**

**Senator Christmann** handed out his amendments and explained them, which are attached. He stated that in addition to Senator Mathern's amendments, his amendments made the following changes/additions: Eliminate section 1 that pulls the decision into the local school boards that would be involved and leave the Dept of Public Instruction out of the utility business. In Section 4 of the bill, the line would put part of this into the Dept. of Public Instruction so this amendment would sift those words into line 1 of page 2 after the word "apparatus". Eliminate section 5 which has nothing to do with these bills, it is simply a policy statement that is a slap in the face to one of the most consistent and profitable industries in the state, by saying "it is the policy of this state to encourage wind turbines". He found that offensive and then in section 7 the last sentence is unnecessary. Senator Holmberg summarized Senator Christmann's amendments. Senator Christmann clarified what would be left in the bill. Senator Andrist: Wondered if the last sentence that Senator Christmann wanted to get rid of would mean that the schools had to put the wind turbines on their own property. Senator Christmann stated that the previous statement states that also. Discussion on how schools would build wind turbines and where. Senator Mathern clarified what he felt was meant in Section 5. Senator Christmann stated then they should have worded it differently and Senator Mathern agreed. Senator Andrist stated that he would still like to leave line 20-22 on page 2 in the bill, could the amendment be divided. Senator Holmberg stated that would be part A and everything else would be part b. Senator Christmann stated his

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10/21/03  
Date

Page 3  
Senate Appropriations Committee  
Bill/Resolution Number SB 2244 Votes  
Hearing Date Feb. 17, 2003

objections to this part of the amendments being removed. Senator Andrist stated that schools should be allowed to put their turbine where they want to. Senator Tallackson stated wouldn't it be better language if it stated "within the bounds of the consortium"? Senator Christmann stated that would be much more acceptable. Senator Andrist asked if they should take off site and remote location out and put in anywhere within the cooperating school district. Senator Schoebinger stated that it could be made easier if we just add on to the last on line 20 the school district and we could pass Senator Christmann's amendments as is. Senator Holmberg stated that language might be better as long as you know that that section only talks about school districts operating together. That seems to work better. Senator Holmberg stated that the amendments would read as follows; "Section 7, second sentence, would read school districts may join joint to develop, construct and operate wind turbines within the school districts involved" and then leave out the current second sentence. Senator Christmann stated that was a better solution. Senator Holmberg asked if the amendments could be voted on as "friendly amendments" as amendments. Stephanie knows what would be amendments. **Voice vote on the "friendly" amendments was taken and motion passed.** Question asked if this was a vote for just the change of wording on that one line. Senator Holmberg stated that was correct. Vote was now taken on the amendment 0304 as amendment as amended. Voice vote. Motion passed.

**Senator Mathern** moved for a **DO PASS as AMENDED**, seconded by **Senator Andrist**.

Senator Christmann stated that it was not the purpose of the school to be providing their utilities, do we want them getting into the telephone, building their own roads for their buses, etc. Their job is to be educating the children, not getting into the power industry. I hope we can defeat this motion and give it a do not pass.

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10/21/03  
Date

Page 4

Senate Appropriations Committee

Bill/Resolution Number SB 2244 Votes

Hearing Date Feb. 17, 2003

Roll call vote was taken, which is attached. **Total: 8 yes, 5 no 1 absent and not voting. Motion carried for a DO PASS as AMENDED. Senator Andrist will carry the bill to the Senate Floor.**

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10/21/03  
Date

**FISCAL NOTE**  
Requested by Legislative Council  
02/20/2003

Amendment to: SB 2244

**1A. State fiscal effect:** *Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.*

	2001-2003 Biennium		2003-2005 Biennium		2005-2007 Biennium	
	General Fund	Other Funds	General Fund	Other Funds	General Fund	Other Funds
Revenues	\$0	\$0	\$0	\$0	\$0	\$0
Expenditures	\$0	\$0	\$0	\$0	\$0	\$0
Appropriations	\$0	\$0	\$0	\$0	\$0	\$0

**1B. County, city, and school district fiscal effect:** *Identify the fiscal effect on the appropriate political subdivision.*

2001-2003 Biennium			2003-2005 Biennium			2005-2007 Biennium		
Counties	Cities	School Districts	Counties	Cities	School Districts	Counties	Cities	School Districts
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**2. Narrative:** *Identify the aspects of the measure which cause fiscal impact and include any comments relevant to your analysis.*

This bill has no identifiable fiscal impact on state or local school district funds.

**3. State fiscal effect detail:** *For information shown under state fiscal effect in 1A, please:*

**A. Revenues:** *Explain the revenue amounts. Provide detail, when appropriate, for each revenue type and fund affected and any amounts included in the executive budget.*

N/A

**B. Expenditures:** *Explain the expenditure amounts. Provide detail, when appropriate, for each agency, line item, and fund affected and the number of FTE positions affected.*

N/A

**C. Appropriations:** *Explain the appropriation amounts. Provide detail, when appropriate, of the effect on the biennial appropriation for each agency and fund affected and any amounts included in the executive budget. Indicate the relationship between the amounts shown for expenditures and appropriations.*

N/A

<b>Name:</b>	Tom Decker	<b>Agency:</b>	Public Instruction
<b>Phone Number:</b>	328-2267	<b>Date Prepared:</b>	02/20/2003

## FISCAL NOTE

Requested by Legislative Council  
01/27/2003

### REVISION

Bill/Resolution No.: SB 2244

1A. **State fiscal effect:** Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.

	2001-2003 Biennium		2003-2005 Biennium		2005-2007 Biennium	
	General Fund	Other Funds	General Fund	Other Funds	General Fund	Other Funds
Revenues	\$0	\$0	\$0	\$1,434,670	\$0	\$1,434,670
Expenditures	\$0	\$0	\$0	\$0	\$0	\$0
Appropriations	\$0	\$0	\$0	\$0	\$0	\$0

1B. **County, city, and school district fiscal effect:** Identify the fiscal effect on the appropriate political subdivision.

2001-2003 Biennium			2003-2005 Biennium			2005-2007 Biennium		
Counties	Cities	School Districts	Counties	Cities	School Districts	Counties	Cities	School Districts
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

2. **Narrative:** Identify the aspects of the measure which cause fiscal impact and include any comments relevant to your analysis.

Revenue projections based on 2001 revenue for affected units.

3. **State fiscal effect detail:** For information shown under state fiscal effect in 1A, please:

A. **Revenues:** Explain the revenue amounts. Provide detail, when appropriate, for each revenue type and fund affected and any amounts included in the executive budget.

Revenue from proposed generation tax would go to the Coal Trust Fund.

B. **Expenditures:** Explain the expenditure amounts. Provide detail, when appropriate, for each agency, line item, and fund affected and the number of FTE positions affected.

N/A

C. **Appropriations:** Explain the appropriation amounts. Provide detail, when appropriate, of the effect on the biennial appropriation for each agency and fund affected and any amounts included in the executive budget. Indicate the relationship between the amounts shown for expenditures and appropriations.

N/A



Name:	Tom Decker	Agency:	Public Instruction
Phone Number:	328-2267	Date Prepared:	01/27/2003

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**FISCAL NOTE**  
Requested by Legislative Council  
01/22/2003

**REVISION**

Bill/Resolution No.: SB 2244

**1A. State fiscal effect:** *Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.*

	2001-2003 Biennium		2003-2005 Biennium		2005-2007 Biennium	
	General Fund	Other Funds	General Fund	Other Funds	General Fund	Other Funds
Revenues	\$0	\$0	\$1,434,670	\$0	\$1,434,670	\$0
Expenditures	\$0	\$0	\$0	\$0	\$0	\$0
Appropriations	\$0	\$0	\$0	\$0	\$0	\$0

**1B. County, city, and school district fiscal effect:** *Identify the fiscal effect on the appropriate political subdivision.*

2001-2003 Biennium			2003-2005 Biennium			2005-2007 Biennium		
Counties	Cities	School Districts	Counties	Cities	School Districts	Counties	Cities	School Districts
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**2. Narrative:** *Identify the aspects of the measure which cause fiscal impact and include any comments relevant to your analysis.*

Revenue projections based on 2001 revenue for affected units.

**3. State fiscal effect detail:** *For information shown under state fiscal effect in 1A, please:*

**A. Revenues:** *Explain the revenue amounts. Provide detail, when appropriate, for each revenue type and fund affected and any amounts included in the executive budget.*

Revenue from proposed generation tax would go to the Coal Trust Fund.

**B. Expenditures:** *Explain the expenditure amounts. Provide detail, when appropriate, for each agency, line item, and fund affected and the number of FTE positions affected.*

N/A

**C. Appropriations:** *Explain the appropriation amounts. Provide detail, when appropriate, of the effect on the biennial appropriation for each agency and fund affected and any amounts included in the executive budget. Indicate the relationship between the amounts shown for expenditures and appropriations.*

N/A

Name:	Tom Decker	Agency:	Public Instruction
Phone Number:	328-2267	Date Prepared:	01/24/2003

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**FISCAL NOTE**  
Requested by Legislative Council  
01/20/2003

Bill/Resolution No.: SB 2244

**1A. State fiscal effect:** *Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.*

	2001-2003 Biennium		2003-2005 Biennium		2005-2007 Biennium	
	General Fund	Other Funds	General Fund	Other Funds	General Fund	Other Funds
Revenues	\$0	\$0	\$0	\$0	\$0	\$0
Expenditures	\$0	\$0	\$0	\$0	\$0	\$0
Appropriations	\$0	\$0	\$0	\$0	\$0	\$0

**1B. County, city, and school district fiscal effect:** *Identify the fiscal effect on the appropriate political subdivision.*

2001-2003 Biennium			2003-2005 Biennium			2005-2007 Biennium		
Counties	Cities	School Districts	Counties	Cities	School Districts	Counties	Cities	School Districts
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**2. Narrative:** *Identify the aspects of the measure which cause fiscal impact and include any comments relevant to your analysis.*

There is no identifiable impact on state revenue or expenditures.

**3. State fiscal effect detail:** *For information shown under state fiscal effect in 1A, please:*

**A. Revenues:** *Explain the revenue amounts. Provide detail, when appropriate, for each revenue type and fund affected and any amounts included in the executive budget.*

N/A

**B. Expenditures:** *Explain the expenditure amounts. Provide detail, when appropriate, for each agency, line item, and fund affected and the number of FTE positions affected.*

N/A

**C. Appropriations:** *Explain the appropriation amounts. Provide detail, when appropriate, of the effect on the biennial appropriation for each agency and fund affected and any amounts included in the executive budget. Indicate the relationship between the amounts shown for expenditures and appropriations.*

N/A

Name:	Tom Decker	Agency:	Public Instruction
Phone Number:	328-2267	Date Prepared:	01/22/2003

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Operator's Signature

Date

30345.0301  
Title.

Prepared by the Legislative Council staff for  
Senator Erbele  
January 20, 2003

Exhibit  
21  
SB  
2244

PROPOSED AMENDMENTS TO SENATE BILL NO. 2244

Page 2, line 28, after the underscored period insert "The purchasing electric utility shall purchase any excess electricity produced by school districts operating wind turbines at the utility's avoided costs as determined by the commission."

Renumber accordingly

30345.0303  
Title.

Prepared by the Legislative Council staff for  
Senator Mathern  
January 31, 2003

WIND

PROPOSED AMENDMENTS TO SENATE BILL NO. 2244

Page 2, remove lines 9 through 17 and lines 23 through 31

Page 3, remove lines 1 through 30

Page 4, remove lines 1 through 8

Renumber accordingly

Mathern  
D. Mathern  
(1 min)

Page No. 1

30345.0303

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Operator's Signature

*Deanna D. Mathern*

10/21/03

Date

30345.0304  
Title.

Prepared by the Legislative Council staff for  
Senator Christmann  
February 5, 2003

PROPOSED AMENDMENTS TO SENATE BILL NO. 2244

*Christmann  
amend.*

Page 1, line 2, remove "a new subsection to section 15.1-02-04 and"

Page 1, line 3, remove "duties of the"

Page 1, line 4, remove "superintendent of public instruction and"

Page 1, remove lines 8 through 11

Page 2, line 1, after the second comma insert "to develop, construct, and operate wind turbines."

Page 2, line 2, remove the overstrike over "and"

Page 2, line 4, remove "and develop."

Page 2, line 5, remove "construct, and operate wind turbines"

Page 2, remove lines 6 through 17

Page 2, line 20, remove "Notwithstanding any other"

Page 2, remove lines 21 through 31

Page 3, remove lines 1 through 30

Page 4, remove lines 1 through 8

Renumber accordingly

Page No. 1

30345.0304

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Deanna D. Hall  
Operator's Signature

10/21/03  
Date

30345.0305  
Title.0400

Prepared by the Legislative Council staff for  
Senate Appropriations  
February 17, 2003

*JP*  
2-18-03

PROPOSED AMENDMENTS TO SENATE BILL NO. 2244

Page 1, line 2, remove "a new subsection to section 15.1-02-04 and"

Page 1, line 3, remove "duties of the"

Page 1, line 4, remove "superintendent of public instruction and"

Page 1, remove lines 8 through 11

Page 2, line 1, after the second comma insert "to develop, construct, and operate wind turbines."

Page 2, line 2, remove the overstrike over "and"

Page 2, line 4, remove ", and develop."

Page 2, line 5, remove "construct, and operate wind turbines"

Page 2, remove lines 6 through 17

Page 2, line 19, remove "provision of" and remove "into"

Page 2, line 20, after "turbines" insert "within the participating school districts" and remove "Notwithstanding any other"

Page 2, remove lines 21 through 31

Page 3, remove lines 1 through 30

Page 4, remove lines 1 through 8

Renumber accordingly

Voice on  
rolls on  
amendment  
motion carried

Date: 2/17/03  
Roll Call Vote #: 1

2003 SENATE STANDING COMMITTEE ROLL CALL VOTES  
BILL/RESOLUTION NO. 2244

Senate Appropriations Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number \_\_\_\_\_

Action Taken do pass as amended

Motion Made By Mathern Seconded By Andrist

Senators	Yes	No	Senators	Yes	No
Senator Holmberg, Chairman	✓				
Senator Bowman, Vice Chair		✓			
Senator Grindberg, Vice Chair					
Senator Andrist	✓				
Senator Christmann		✓			
Senator Kilzer		✓			
Senator Krauter	✓				
Senator Kringstad	✓				
Senator Lindaas	✓				
Senator Mathern	✓				
Senator Robinson	✓				
Senator Schobinger		✓			
Senator Tallackson	✓				
Senator Thane		✓			

Total (Yes) 8 No 5

Absent 1

Floor Assignment Andrist

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

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Deanna Waller  
Operator's Signature

10/21/03  
Date



REPORT OF STANDING COMMITTEE (410)  
February 18, 2003 4:10 p.m.

Module No: SR-31-3158  
Carrier: Andrist  
Insert LC: 30345.0305 Title: .0400

**REPORT OF STANDING COMMITTEE**

**SB 2244: Appropriations Committee (Sen. Holmberg, Chairman) recommends AMENDMENTS AS FOLLOWS and when so amended, recommends DO PASS (8 YEAS, 5 NAYS, 1 ABSENT AND NOT VOTING). SB 2244 was placed on the Sixth order on the calendar.**

Page 1, line 2, remove "a new subsection to section 15.1-02-04 and"

Page 1, line 3, remove "duties of the"

Page 1, line 4, remove "superintendent of public instruction and"

Page 1, remove lines 8 through 11

Page 2, line 1, after the second comma insert "to develop, construct, and operate wind turbines,"

Page 2, line 2, remove the overstrike over "and"

Page 2, line 4, remove ", and develop,"

Page 2, line 5, remove "construct, and operate wind turbines"

Page 2, remove lines 6 through 17

Page 2, line 19, remove "provision of" and remove "into"

Page 2, line 20, after "turbines" insert "within the participating school districts" and remove "Notwithstanding any other"

Page 2, remove lines 21 through 31

Page 3, remove lines 1 through 30

Page 4, remove lines 1 through 8

Renumber accordingly

2003 HOUSE EDUCATION

SB 2244

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Deanna D. Hall  
Operator's Signature

10/21/03  
Date

2003 HOUSE STANDING COMMITTEE MINUTES  
BILL/RESOLUTION NO. SB 2244  
House Education Committee

☐ Conference Committee

Hearing Date March 19, 2003

Tape Number	Side A	Side B	Meter #
1	x		4420-end
1		x	00-3320
1		x	3566-3800
Committee Clerk Signature <i>Linda Frechtner</i>			

Opened hearing on SB 2244

**Sen. Robert Erbele, District 28,**

In the past year the development of two wind farms, Global Winds and Florida Power and Light. There will be 85M worth of construction happening in our districts this summer. That is translating into some savings and tax revenues. Bring in 6 or more high tech, primary wage jobs to our area. This is a result of the Legislature passing three bills last session, that opened the way for this all to happen with tax credits and incentives. Through our economic development efforts it was brought to our attention that the schools in Iowa and Minnesota have gone together and built their own turbines, which is creating considerable savings to the school districts energy fund. I represent 11 small school districts, their average cost for energy is 25K per year range, and if they could get involved in this wind energy project it would be a savings to them in their energy bill. And what we needed to do in this bill was to allow them to join together, joint bonding powers, and then go to an off site place, build a tower. Read a short article in a paper about Texas. on tape. World wide wind rankings in 2001, Germany is the leader, Spain, Texas.

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*Deanna Waller*  
Operator's Signature

*12/21/03*  
Date

Page 2  
House Education Committee  
Bill/Resolution Number SB 2244  
Hearing Date March 19, 2003

Texas is number 1 in renewable energy potential, but the fine print says Texas is a close second to North Dakota in wind energy. So they are way ahead of all of the other states in tapping the energy, But ND is still the leading wind energy source. The Construction is just beginning. We want to address this and provide schools the opportunity to do this, we are always looking for dollars in Education. When this bill was in the Senate it was four pages long, it has been greatly condensed. It started out in Appropriation, but in order to keep it alive we had to cut our any appropriations. I do have an amendment, this will create some discussion for you today as well. It addresses metering.

**Rep. Solberg** When the net metering portion was removed, What was the major reason for bringing it back? **Erberle:** So that schools can capture some of the dollars.

**Dennis Anderson, Edgeley, Coteau Winds Development, Chairman**

Since we have the windiest part of the state, our economic development is working toward this project. Edgeley, Kulm, Ellendale are schools districts joined together to work for the betterment of the whole. 400K is the estimated figure for the county treasure to send out in tax slips on the two wind farms. 68% of the taxes go towards education. And so that is 280K of school money that will be available for Lamoure and Dickey County, ie. Ellendale and Kulm school district. So that is a significant boost for the school districts. In Iowa they are 7 years ahead, 15 schools (Spirit Lake) have turbines. After 2 years of operation, they needed to go bigger, in 2007 those turbines will be paid for. The turbines that we are talking about will be 700-800K, it takes approx. 6 1/2-9 years to pay back. But the laws in the state don't allow schools to construct turbine and net metering, so that is why we are in front of you. flip tape So the 12 schools in

Page 3  
House Education Committee  
Bill/Resolution Number SB 2244  
Hearing Date March 19, 2003

Iowa have invested the money and in 8-10 years their loan is paid off and after that they have free electricity. is that a good investment, yes.

**Rep. Jon Nelson** Are you building your own transmission lines?

**Anderson:** Our intent is to locate in the same service area. For instance all in MDU, Ottertail, X-cel, belonging to the same utility. And using their transmission lines.

**Rep. Jon Nelson** The school districts that would be part of the consortium would bond for wind turbine adding a cost to the property tax burden which is already a concern. We have had several bill, that dealt with school's food service getting outside the arena of education and into private for profit. A crude analogy with some similarities here. If the school districts and vocational districts want to get into the machinery sales business, but they wanted to use your lot to sell their machinery from, that is direct competition, would you be as excited about this.

**Anderson:** I understand you point, We can do nothing or we can do something. Utilities are guaranteed a profit and are regulated by the Public Service Commission, if they get to much they have to pay back. So I think in a sense we have to find some way to pay of Education.

**Rep. Jon Nelson** There is a larger issue, ND is energy export state, viable power outside of the state is the issue. **Anderson:** export yes to another market.

**Rep. Hawken:** Why do we have Florida Power & Light coming into the state

**Anderson:** Why wouldn't we, They want to be there and they have invested the money.

**Rep. Williams** 2 schools you mentioned did they go through the bonding procedure in ND

**Anderson:** We have been talking to the banks in the area.

**Rep. Solberg** Regarding net metering portion that was amended out of the proposed bill, and now it is to be amended back in?

Deanna D. Smith  
Operator's Signature

10/21/03  
Date

Page 4  
House Education Committee  
Bill/Resolution Number SB 2244  
Hearing Date March 19, 2003

**Anderson:** We are dead in the water if it is not in there, we don't have a project.

**Vice Chair Johnson** 400K of new tax revenues, any talk of tax exemptions as an incentive

**Anderson:** There was a income tax exemption passed last session, 5% for the 1st 6 years. So what does it cost the state, tax exemption and the sales tax on the turbines themselves.

**Mike Brandenburg, Edgeley**

Wind energy, we are trying to find more money for education. This is something that can work and will work for education. 230 schools, 200 small and 30 large, power bills 25-40K x 200 = 5M/year The life expectancy of a wind turbine is 30 years, the pay back on a turbine in 8-10 years, 20 years of free time, money used for education. Small school 150K x 30 = 4 1/2M Now you have 9 1/2M/yr x 20 yr. = 190M to education for energy cost, and those costs will go up.

Good bad - whatever, more jobs more revenue for education. Coal in the western part of the state it has increased jobs, enrollment. In our area we have wind, no coal and enrollment is declining.

What is the cost of public relations to tap other markets of the Utility Companies.

**Rep. Jon Nelson** Can you explain net energy billing to me

**Brandenburg:** There are two meters, 1 at the school, that is the one you pay your bill from. the second is at the turbine, generating power. Then A-B, B giving a credit to reduce A.

**Rep. Jon Nelson** Energy Companies allow you to use their lines, pick off that part of there business, and pay you the same amount of the power that there using as a no net cost for them What is in it for them in the relationship building process.

**Brandenburg:** Dealing with transmission issue, the cost is going to be assumed by the school for the meter. The trade off that I see here that really pushes it, is to get more power to export out of the state.

Page 5  
House Education Committee  
Bill/Resolution Number SB 2244  
Hearing Date March 19, 2003

**Rep. Jon Nelson** I'm not a visionary as you are, I am wondering how you are going to build a relationship with the existing energy companies in this state, when you pick off their customers, use their lines and then want them to work with you. I don't think you are creating the healthiest relationship **Brandenburg:** This is all a learning process

**Rep. Hawken:** We have the tax credit that comes off the bottom line, then we have the sales tax for however long, (forever) what was the third thing? property tax exemption

**Brandenburg:**

**Rep. Hanson** What about the cost for sharing the maintenance

**Brandenburg:** they are built into the cost of the project

**Rep. Hanson** if you had major ice storm are you prepared to pay the repair costs.

**Brandenburg:** Transmission lines and turbines are insured.

OPPOSITION:

**Steve Schultz, Ottertall Power**

we support wind energy and wind projects. When you are in business they have to make good financial sense. But up until now we thought the net metering was gone, that is what we are opposed to. However there are a number of things that we dislike. Touch on some points that are real questions on this bill that may have problems down the road. The number one item is the federal energy regulatory commission refereed to as FERC, under what is called the Purpa Act is that the utility is only obligated to buy back energy at the point of interconnection. IE. the generator and the customer load at the same site. ND bill contemplates having wind generation at a remote site and forcing the utility to wheel. This violates some of the propriety termination that FERC has handed down in these disputes. So there is a question at the federal level that we can

Page 6  
House Education Committee  
Bill/Resolution Number SB 2244  
Hearing Date March 19, 2003

even do this. Also we feel that allow raise the possibility of both transmission and a distribution wheeling. Transmission wheeling is covered under FERC regulations and that is done all of the time now. Wheeling means shipping some one else's electricity over someone else's lines. The lines will only hold so much electricity. We are very pushed for transmission lines today. The regulation on the flow of electricity down the line is a very complex issue and is monitored very closely. Distribution wheeling at this point is not done and it was talked about the generators being connected to one company lines, I'm not sure that it is even feasible, it is going to take a lot of schools out of that picture. The joint powers agreement (jpa) our people think that they have a potential to be a nightmare. What happens if we get ten schools that bond together on one project and each one want net metering for their share of that project. Administrative costs could be significant to start this out. Also to do net metering from a remote site from school requires now the combining of two accounts, we currently don't do that and that is regulated. Then there is a question of recourse, if a school built a remote wind generator, we have to do transmission upgrades, the question being we have to ask the Public Service Commission for recovery of costs there and how will that all count. Net metering opens up the problem of one customer subsidizing and other customer for costs. The commission has taken a very dim view of that, as they should. There is that question there. Net metering, because we are not being paid back for our costs, the meter is to run backwards, the question is this just a new tax? Mr. Anderson said that we are guaranteed a profit, we take exception to that we are not guaranteed a profit, we are limited to the maximum return

**Rep. Solberg** Cost to a power company would be subsidized schools under net metering, is that correct. **Schultz** Yes that is correct the way we understand it in this arrangement.



Page 7

House Education Committee

Bill/Resolution Number SB 2244

Hearing Date March 19, 2003

**Harland, ND Association of the Rural Electric Cooperatives**

We have no real problem with this bill as it came over to the house, we second the comments of

Steve Schultz on the net metering amendment.

closed hearing

**Rep. Haas moved a DO NOT PASS, Rep. Norland second the motion**

discussion:

**Roll vote: 11-1-2, passed, Rep. Jon Nelson will carry the bill to the floor**

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Deanna O. Ball  
Operator's Signature

10/21/03  
Date

30345.0401  
Title.

Prepared by the Legislative Council staff for  
Senator Erbele  
February 27, 2003

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2244

Page 2, line 3, after the underscored period insert "Notwithstanding any other law, a school district may operate a wind turbine onsite or offsite at a remote location.

**SECTION 5. Net metering.** A school district operating wind turbines under this Act may enter a net energy billing agreement whereby the output from the wind turbine reverses the electric meter used to measure sales from the electric utility to the school district. If the school district and the electric utility enter a net energy billing agreement, the purchasing electric utility shall file an annual report of total monthly energy produced with the public service commission. The purchasing electric utility may recover metering costs associated with production monitoring from the school district.

Renumber accordingly

Dennis O. Ball  
Operator's Signature

10/21/03  
Date

Date: 3/19/03  
Roll Call Vote #: 1

2003 HOUSE STANDING COMMITTEE ROLL CALL VOTES  
BILL/RESOLUTION NO. 2244

House HOUSE EDUCATION Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number \_\_\_\_\_

Action Taken WNP

Motion Made By Haas Seconded By Norland

Representatives	Yes	No	Representatives	Yes	No
Chairman Kelsch	✓				
Rep. Johnson		✓			
Rep. Nelson	✓				
Rep. Haas	✓				
Rep. Hawken	✓				
Rep. Herbel	✓				
Rep. Meier	✓				
Rep. Norland	✓				
Rep. Sitte	✓				
Rep. Hanson	✓				
Rep. Hunsakor	✓				
Rep. Mueller	AB				
Rep. Solberg	AB				
Rep. Williams	✓				

Total (Yes) 11 No 1

Absent 2

Floor Assignment Nelson

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

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Date

**REPORT OF STANDING COMMITTEE (410)**  
March 20, 2003 9:09 a.m.

Module No: HR-50-5286  
Carrier: Nelson  
Insert LC: . Title: .

**REPORT OF STANDING COMMITTEE**

SB 2244, as engrossed: Education Committee (Rep. R. Kelsch, Chairman) recommends  
**DO NOT PASS** (11 YEAS, 1 NAY, 2 ABSENT AND NOT VOTING). Engrossed  
SB 2244 was placed on the Fourteenth order on the calendar.

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Operator's Signature

10/21/03  
Date

2003 TESTIMONY

SB 2244

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Deanna D. Hall  
Operator's Signature

10/21/03  
Date

SB  
2244  
Exhibit  
#2

# THE SCORE

**NORTH DAKOTA**

**IOWA**

**SCHOOLS 0**

**15**

**INSTALLED**

**MEGAWATTS 4.3**

**422**

**2003 60**

**146**

**TOTAL 64.3**

**568**

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Deanna D. Smith  
Operator's Signature

10/21/03  
Date

# THE SCORE

## NORTH DAKOTA/ IOWA

0

15

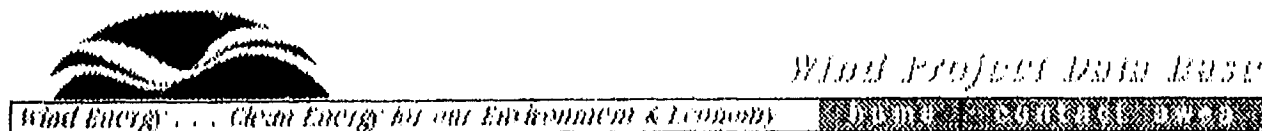
MW= 64

568

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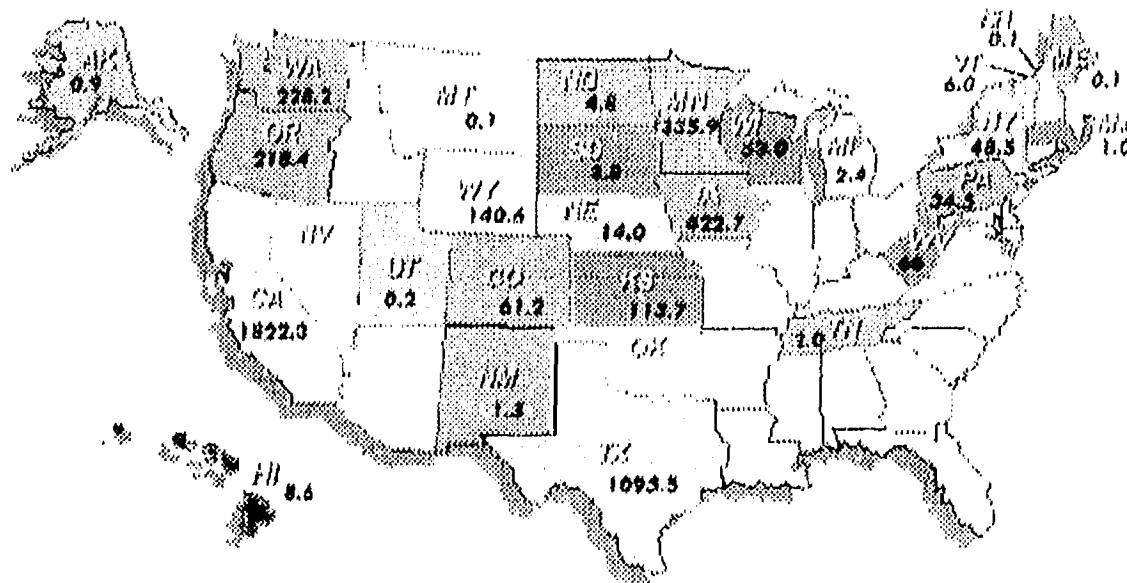
Deanna D. Hall  
Operator's Signature

10/21/03  
Date



## Wind Energy Projects Throughout the United States of America

Click on the shaded states to access information on existing  
and planned wind energy projects. Installed MW for each state in black.  
Updated: January 23, 2003



**TOTAL INSTALLED WIND ENERGY CAPACITY: 4,685 MW as of Jan  
21, 2003**  
**U.S. Installed Capacity, 1981 - 2002**

ALASKA | CALIFORNIA | COLORADO | HAWAII | ILLINOIS | IOWA  
KANSAS | MAINE | MASSACHUSETTS | MICHIGAN | MINNESOTA | MONTANA  
NEBRASKA | NEVADA | NEW HAMPSHIRE | NEW MEXICO | NEW YORK | NORTH  
DAKOTA  
OKLAHOMA | OREGON | PENNSYLVANIA | SOUTH DAKOTA | TENNESSEE | TEXAS |  
UTAH |  
VERMONT | WASHINGTON | WEST VIRGINIA | WISCONSIN | WYOMING



AWEA HOME

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<http://www.awea.org/projects/index.html>

1/25/2003

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*Deanna D. Smith*  
Operator's Signature

10/21/03  
Date



## Spirit Lake School Monthly Windturbine Data

		Total	Turbine	Building	Purchased	Wind Energy
January		Days	Production	Use	or Sold	Dollars
21-Jan-94	23-Feb-94	33	32636	26876	-5760	\$2,282.31
21-Jan-95	21-Feb-95	31	27367	25447	-1920	\$2,067.50
22-Jan-96	22-Feb-96	31	37793	26657	-11136	\$3,049.05
21-Jan-97	21-Feb-97	31	28303	24655	-3648	\$2,173.69
14-Jan-98	17-Feb-98	34	11429	26789	15360	\$873.18
15-Jan-99	16-Feb-99	32	14997	25557	10560	\$1,145.77
17-Jan-00	14-Feb-00	28	21173	27701	6528	\$1,630.32
15-Jan-01	12-Feb-01	28	12487	28615	16128	\$966.49
14-Jan-02	12-Feb-02	29	20962	38962	18000	\$1,370.21
<b>February</b>		<b>277</b>	<b>207147</b>	<b>251259</b>	<b>44112</b>	<b>\$15,550.52</b>
23-Feb-94	23-Mar-94	28	28113	20625	-7488	\$2,038.67
22-Feb-95	22-Mar-95	28	29670	23010	-5760	\$2,179.29
22-Feb-96	21-Mar-96	28	41845	22645	-19200	\$2,893.37
21-Feb-97	22-Mar-97	29	39449	25817	-13632	\$2,865.46
17-Feb-98	17-Mar-98	28	27588	25092	-2496	\$2,104.18
16-Feb-99	17-Mar-99	29	26497	27649	1152	\$2,024.37
14-Feb-00	15-Mar-00	30	29342	27614	-1728	\$2,269.83
12-Feb-01	13-Mar-01	29	25011	28851	3840	\$1,935.85
12-Feb-02	14-Mar-02	30	32306	38906	6600	\$2,390.64
<b>March</b>		<b>259</b>	<b>279821</b>	<b>241109</b>	<b>-38712</b>	<b>\$20,701.66</b>
23-Mar-94	21-Apr-94	29	39107	19331	-19776	\$2,636.02
22-Mar-95	21-Apr-95	30	38023	22663	-15360	\$2,666.19
22-Mar-96	20-Apr-96	29	32073	23241	-8832	\$2,315.30
22-Mar-97	15-Apr-97	24	32084	16724	-15360	\$2,256.73
17-Mar-98	15-Apr-98	29	27939	25827	-2112	\$2,138.54
17-Mar-99	13-Apr-99	27	40311	23223	-17088	\$2,838.51
15-Mar-00	11-Apr-00	27	25544	26120	576	\$1,966.89
13-Mar-01	11-Apr-01	29	24284	24860	384	\$1,879.58
14-Mar-02	12-Apr-02	29	23910	34510	10600	\$1,757.39
<b>April</b>		<b>253</b>	<b>283275</b>	<b>216499</b>	<b>-66968</b>	<b>\$20,455.15</b>
21-Apr-94	20-May-94	29	32554	22570	-9984	\$2,246.23
21-Apr-95	21-May-95	30	18636	24072	6336	\$1,887.83
20-Apr-96	21-May-96	31	28325	26211	-2112	\$2,133.97
15-Apr-97	13-May-97	28	27953	24305	-3648	\$2,145.67
15-Apr-98	15-May-98	30	21759	30199	8640	\$1,662.19
13-Apr-99	13-May-99	30	30763	22867	-16896	\$2,806.82
11-Apr-00	12-May-00	31	29405	33821	4416	\$2,264.19
11-Apr-01	10-May-01	29	29186	27650	-1536	\$2,608.88

<http://www.spirit-lake.k12.ia.us/dist/bg/wind%20monthly%20data.htm>

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- events  
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**issues**
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## Press Release

| Press Releases |

July 3, 2002

### New Wind Turbine to Help Power Clarion-Goldfield School District

CLARION % Clarion-Goldfield is Iowa's latest school district to adopt wind power as an energy source. The district installed a 50-kW turbine near its high school in Clarion, and began producing electricity on June 15.

According to Dr. Robert Olson, superintendent at Clarion-Goldfield Community Schools, the district became interested in wind energy about five years ago when it saw other Iowa school districts installing turbines for power production.

"Wind energy offers an excellent opportunity for us to meet electricity needs, but more importantly, to create a hands-on learning experience for our students," Olson said.

The school plans to create a physics/renewable energy curriculum that includes monitoring of the turbine's electricity production and wind speeds, and establishment of a Web site.

The school district received technical assistance from the Iowa DNR and Wind Utility Consulting, a company based in Jefferson, Iowa. Financial assistance came from a U.S. Department of Energy grant for more than \$26,000 obtained by the DNR, as well as \$110,000 in low-interest loans through the DNR Energy Bank program and the Iowa Energy Center's Alternate Energy Revolving Loan program.

The turbine should save the district almost \$6,000 in annual energy costs and pay for itself in about 16 years.

515-532-2895  
- 3423

Cell 515 689 10 22

See other side

<http://www.state.ia.us/dnr/energy/news/press/2002/July%203,%202002.htm>

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*Wind Energy Weekly*

Wind Energy . . . Clean Energy for our Environment & Economy

Wind contact area

## IOWA SCHOOL DISTRICT TO RECEIVE WIND ENERGY FOR CHRISTMAS

**Vol. 17, #828, 21 December 1998** -- Forest City (Iowa) Community Schools, the third school district in Iowa to rely on non-polluting wind energy to power its classrooms, will begin operating a 600-kilowatt turbine just in time for Christmas, according to the engineering firm that is coordinating the turbine's installation.

The project began when Paul Smith, a former student at Forest City, presented a research paper on wind energy to the city school board several years ago. The presentation generated a great deal of interest and spurred the current wind turbine program, which utilizes a 50-meter-diameter Nordex Balcke-Duerr wind turbine from Denmark.

In addition to incorporating wind energy into the classroom curriculum, the school district will have a Web site with a microprocessor-based connection to the turbine. The site will display real-time electrical production and wind energy data. The turbine is expected to provide 80% to 90% of the school's electrical needs.

Across the state, another school district, Akron-Westfield Community Schools, will host its own wind turbine when installation of a 600-kilowatt Vestas unit is completed in mid-January. Akron-Westfield will be at least the fourth Iowa school district to utilize wind energy.

Students at Akron-Westfield school were involved with its wind project from the very beginning, when 20 were chosen to assist in the analysis, schematic design, construction documentation, and construction administration of the wind turbine. The group of students, and their mentors, will be recognized at a national education conference in San Diego in January.

"The impact these projects have had on our future energy leaders has been positive," said Paul Ryan, spokesperson for Prochaska & Associates engineering firm. "Besides the 3Es (educational, environmental and economic benefits), these projects pave the way for other public and private entities to investigate this viable technology."

<http://www.awea.org/wew/828-1.html>

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*Deanna D. Smith*

Date

12/21/03

# History of the turbine

The wind turbine started as a Physics project. The Physics students did a study of wind energy that proved interesting. They then obtained an anemometer and placed it on the top of the water tower and collected data for a year. The data showed the average wind speed was high enough to continue the project.

One student then did a feasibility study along with the possible economic numbers. The student and teacher then approached the school board with the information. There were two turbines that were studied. One was a 250 kw turbine and a 600 kw turbine. The annual electric usage of the school was obtained and data was obtained from Iowa State's wind energy calculator. The economics of the larger turbine was the better of the two so the board thought the project should be continued and they authorized the school to do an energy audit of the buildings and correct what was wasting energy. A task force was formed to write the specifications of the turbine and oversee the project to completion. The footings were poured in the fall of 1998 and the turbine assembled in December of 1998. The turbine started producing in January of 1999. Since that time it has produced 3,357,995 kwh (June 15, 2002) of electricity with an approximate dollar value of \$205,000 of which \$50,400 is from an federal alternative energy program which pays the school district 1.5 cents for each kilowatt hour produced.

For further information contact:

Dwight Pierson, Superintendent  
Forest City Community Schools  
Forest City, IA 50436

Phone: 641-585-2323

email: [dpierson@forestcity.k12.ia.us](mailto:dpierson@forestcity.k12.ia.us)

or

[rkvale@forestcity.k12.ia.us](mailto:rkvale@forestcity.k12.ia.us)

[Back to Index Page](#)



## News Article

News Article Archives

### Lynnell Burkett: Energy Blowin' In the Texas Wind - San Antonio Express-News

You know the times are changin' when the two major candidates for land commissioner in this oil and gas state are talking about wind. And more power to 'em.

Republican Jerry Patterson and Democrat David Bernsen, both former state senators and serious candidates, are promising to increase wind power generation on public lands. Mind you, this is not their entire platform. They both plan to do the usual things that land commissioners do -- help take care of veterans, clean up the beaches, promote oil and gas production on state lands to benefit the Permanent School Fund.

But wind definitely is a new wrinkle in the usual list.

Bernsen's is the more aggressive agenda for development of wind energy. He wants to make Texas the Wind Capital of the United States by 2006. Noting that Texas has a wind energy potential of 1,190 billion kilowatts, 20 times that of California, he calls for wind energy to make up 10 percent of the state's overall energy portfolio by 2020.

He also wants to partner with schools to install wind turbines on-site to generate the schools' own electricity, using an Iowa school as a model. And he wants to create wind manufacturing jobs in Texas through a Wind Incentive Package.

Patterson's more modest proposal is to increase wind power generation and use of other renewable energy, such as solar and geothermal power production, on state lands.

Is all this pie-in-the-sky silliness? Not at all. Turns out that wind's time appears to have come.

The Sept. 23 Wall Street Journal, in an article titled "The New Texas Wind Rush: Oil Patch Turns to Turbines, As Ranchers Sell Wind Rights," details the "wind rush of sorts" brought on by a 1999 law mandating that 3 percent of the state's electricity come from renewal sources by 2009 and by a federal tax credit from 1995.

Now, the article reported, major companies such as American Electric Power Co., General Electric and FPL Group have invested \$1 billion in wind rights in the Permian Basin, in the middle of what were oil fields.

State lands once rich with oil and gas should be part of the new boom, for the good of Texas taxpayers. As the Journal noted, California had a go at wind energy in the early 1980s, but when state incentives and federal tax credits went away, the effort became unprofitable.

Forbes, in its upcoming Oct. 14 issue, reports that wind energy is near to

<http://www.davidbernsen.com/showitem.php?a=32&t=n>

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**Summary:**

The Alternate Energy Revolving Loan Program (AERLP) is administered by the Iowa Energy Center and funded by the state's investor-owned utilities. The AERLP provides loan funds to any individual or organization that wants to build renewable energy production facilities in Iowa. Renewable energy includes technologies such as solar, biomass, wind, and small hydro.

Successful applicants receive a single, low-interest loan that consists of a combination of AERLP funds and lender-provided funds. The AERLP provides 50% of the total loan, up to a maximum of \$250,000 at 0% interest. The remainder of the loan is made by the lender at market rate. The maximum loan term allowed for the AERLP funds is 20 years. As the loans are paid back to the Iowa Energy Center, those funds revolve back into the program and are made available to new applicants.

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## Farming the Wind

(Updated 2/6/01)

On July 22, 1993, the wind turbine on the lawn of the Spirit Lake Elementary School began producing electricity. Today, ninety months later, the school's turbine has produced 1,570,000 kilowatt hours of electricity which would have cost the district \$124,900. This is enough electricity for 264 average Spirit Lake homes for a year. In addition to providing all of the electricity for the 53,000 square foot elementary school, it also produced a reimbursement from the utility company of almost \$25,000.

The final payment for the loan on turbine was made during 1998. Today the almost \$25,000 savings go to the school's instructional program.

In addition to its excellent financial success, the school's wind turbine has been used in school's classes as an educational tool and it has made a significant contribution to the environment.

The energy produced by the clean, renewable wind for the school since existence would have taken 1094 tons of coal or 3,851 barrels of oil. These fossils fuels would have emitted into the atmosphere 3,282,000 pounds of carbon dioxide, 468,000 pounds of sulfur oxide plus thousands of tons of other pollutants.

The district has had over 300 visitors since that warm day in July when the turbine began producing. A number of schools in the area and their students have shown particular interest in the project as they study the use of renewable sources of energy.

## Second Turbine

During the last five years buildings and ground director Jim Tirevold and superintendent Tim Grieves have been studying the feasibility of installing a second turbine. A second turbine would produce about 1,765,797 kilowatt-hours of electricity per year. This about 5 times more production than the first turbine. The result would be an annual profit of \$110,000. This turbine would provide all the electrical needs for the district's middle school, high school, vo-tech, district offices, maintenance building, football field, and baseball and softball fields.

The turbine is expected to cost about \$750,000. The payback, including the cost of interest on the loan and maintenance is about 6.5 years. To produce an equivalent amount of electricity, each year it would require 882 tons of coal or 3,107 barrels of oil. Each year this turbine would prevent 2,648,000 pounds of carbon dioxide emissions, 377,000 pounds of sulfur oxide and hundreds of tons of other pollutants.

The district's second wind turbine could be in operation this summer.

Beginning in the year 2007, when both turbines have been paid for, the district will have about \$120,000 tax free income from the clean, renewable northwest Iowa wind to use to improve education for the children of the Spirit Lake Community School District.

Return to the Top of the page

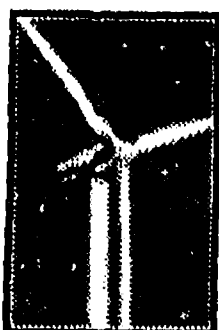
<http://www.spirit-lake.k12.ia.us/dist/bg/wind%20generation.htm>

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## "The Planning Stages"

### Wind Will Bring Savings

#### Akron A-W Board Approves Wind Turbine Plan



## Wind Will Bring Savings to Akron

(Reprinted with permission from the Akron Register-Tribune)

The Akron-Westfield School District will step to the forefront of Iowa schools if and when the school chooses to erect a Wind Turbine Generator, like the one pictured above.

A public hearing will be held on February 16, 1998 at 7 p.m. in the ICN Room at the school complex in Akron. The purpose of the hearing is to take action on a \$705,000 Energy Management Improvement Capital Loan Note. Prior to such action, the board will take public action, the board will take comment both oral and written.

The most significant benefit of erecting a wind turbine to support the District and the community is realized. Initially the school district will use dollars saved to pay off the grants and loan. This usually takes approximately twelve years, but payoff may be seen as soon as 10 years in Akron's case. Since the average life of the turbine is twenty to thirty years, the District will have free electricity for many years after repayment is made.

Surplus power will go into the city grid for its utilization. This will reduce the city's need to purchase power from outside sources.

The District will obtain financing through the Alternative Energy Revolving Loan Program through the Iowa Energy Center. Two hundred and fifty thousand dollars of the loan will be interest free. Another four hundred and fifty five thousand dollars will be at

<http://www.akron-westfield.k12.ia.us/school/wind/winda.html>

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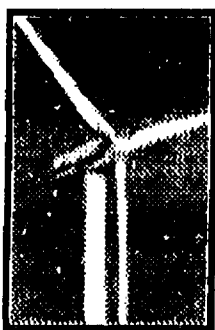
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## "The Building Stages"

### A-W School Wind Turbine Erected

#### A View From The Top!



### A-W School Wind Turbine Erected

(Reprintd with permission from the Akron Register-Tribune)

The Akron-Westfield Community School's computerized wind turbine is up and running. The turbine is located atop the hill about a quarter of a mile southeast of the A-W school.

The turbine was put together late last week and during the weekend. On Tuesday, the turbine was turned on to see if everything was operational.

The turbine's blades are connected to a computerized generator atop a 160-foot tower. The tower, which arrived in two sections, was erected late last week. A 200-foot tall crane from Milwaukee, Wis. was brought in to put the tower together.

On Saturday morning the crane lifted up the 600-kilowatt computerized generator and placed it on top of the tower. The blades and central hub were then put on.

A-W science teacher, Ron Wilmot, said that the tower came ready to assemble. He also said that all of the cables inside were already in there and just had to be hooked up.

The concrete base was poured in early December. The city of Akron then installed the transformer and the wire leading to the city grid at the same time.

All of the early work was done in time for the original schedule, which had the turbine up by Christmas.

Unseasonably warm January and February weather caused a few minor delays in getting all of the equipment up to the top of the hill. That's when Higman Sand and Gravel

<http://www.akron-westfield.k12.ia.us/school/wind/windb.html>

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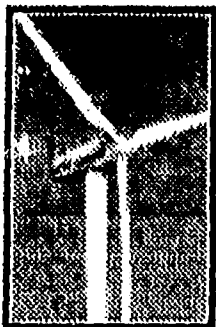
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"It's Up!"

Ribbon Cutting Ceremony To Be Held For Wind Turbine

Wind Turbine Dedicated February 25

## Ribbon Cutting Ceremony To Be Held For Wind Turbine

(Reprinted with permission from the Akron Register-Tribune)

The Akron-Westfield wind turbine will be dedicated in a ribbon cutting ceremony, Thursday, Feb. 25, 5 p.m., at the site. If you are interested in attending, come to the school at 4:50 to ride a bus to the site.

Following the ceremony, there will be a student presentation in the ICN room, along with refreshments in the school commons.

The 160 ft. high wind turbine became a reality last year after a public hearing was held to take action on a \$705,000 Energy Management Improvement Capital Loan Note.

The turbine cost approximately \$720,000, much of which will be financed from external sources such as federal low interest loans or grants.

Some financing was obtained through the Alternative Energy Revolving Loan Program through the Iowa Energy Center. Two hundred and fifty thousand dollars of the loan will be interest free. Another \$450,000 will be at an interest rate of 4.85%.

A Renewable Energy Production Incentive grant received from the federal government will pay 1 1/2 cents back for every kilowatt produced. The grant is for 10 years.

More funding will come from selling back the excess power generated by the turbine to

<http://www.akron-westfield.k12.oh.us/school/wind/winde.html>

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#### MINNESOTA SCHOOL DISTRICT CONSIDERS PRODUCING ITS OWN WIND POWER

The Wayzata School District, a Minneapolis suburb, wants to erect a 170- to 220-foot, three-propeller wind turbine near the high school tennis courts and practice fields. It would cost about \$1.5 million, but supporters say it would generate as much as 1.5 megawatts of electricity and could bring in hundreds of thousands of dollars a year in electricity sales and grants. Renewable-energy grants offered by utility companies such as Xcel Energy make it easier for schools to finance such projects. Dan Carlson, the Wayzata schools technician who got the ball rolling on the wind-turbine project, said that a 9-mile-per-hour wind is needed to start making electricity and that the wind has to be blowing 20 percent of the time to make the machine profitable. "The day the turbine starts turning it needs to turn a profit," Carlson said. "We can't take money out of the classroom to pay for this." The plan is for the district to sell the energy to Xcel, then buy back what's needed for the school. At the Lac qui Parle Valley district in western Minnesota, a 225-kilowatt turbine completed in 1997 makes one-quarter of the electricity used by the district's secondary school. The turbine brings in about \$20,000 a year in savings and energy sales, but that gets plowed into paying off the loan needed to put it up. More: <http://www.me3.org/issues/wind/>

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http://www.state.ia.us/dnr/energy/programs/wind/			
http://www.midwest-renewable.com/			
School Projects			
Spirit Lake	Spirit Lake Community School District http://www.spirit-lake.k12.ia.us/html/district/B&C/building.htm	1.0	2
Fenton	Sentral Community School District	0.065	1
Akron	Akron-Westfield Community School District http://www.akron-westfield.k12.ia.us/school/wind/wind.html	0.600	1
Forest City	Forest City Community School District	0.600	1
Nevada	Nevada High School	0.450	2
Royal	Clay Central/Everly Community School District	0.095	1
Clarion	Clarion-Goldfield Community School District	0.050	1
Future Project	Eldora-New Providence Community School District	TBD	1
Future Project	Sioux Central Community School District	TBD	1
Future Project	Northwood Kensett Community School District	0.250	1

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If you know a hero,  
we encourage you  
to submit a  
nomination  
today...we may  
even share your  
story on this site.

[>> Click Here](#)**Harold Overmann**

Spirit Lake, Iowa

Superintendent Overmann listened to his students and followed through his promise to find clean energy sources for his school district. He and Building and Grounds Manager researched clean energy sources and that in Iowa, wind power would be the way to go! Together, they got the school board to agree to install two wind-driven turbines that provide for Spirit Lake schools and made all the arrangements. Today, wind saves the schools hundreds of thousands of dollars a year while fighting against pollution at the same time.

Installing wind turbines goes way beyond a School Superintendent's description. Superintendent Overmann decided on his own to respect students' concerns about the environment, though he didn't have to research alternative energy sources, lobby the school board, go for the turbines and arranged for their installation.

[Read More Hero Stories >](#)**VOLVO FOR LIFE AWARDS**[HOME](#)[HERO STORIES](#)[AWARDS](#)[INFO](#)[JUDGES](#)[HEROES OF HISTORY](#)[NOMI](#)Copyright 2002 & 2003 Volvo Cars of North America, LLC. All rights reserved. | [Privacy Policy](#) | [Media](#) | [Volvo Cars of North America](#)<http://www.volvoforlifeawards.com/cgi-bin/iowa/english/heros/hero/2.html>

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# Environmental Assessment

Wind Energy Center  
Edgeley/Kulm Project  
North Dakota



**FPL Energy**  
North Dakota Wind, LLC

**DOE/EA-1465**  
**March 2003**



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