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Natural Resources Committee
February 14, 2007

[LB412 LB629]

The Committee on Natural Resources met at 1:30 p.m. on Wednesday, February 14, 2007, in Room 1525 of the State Capitol, Lincoln, Nebraska, for the purpose of conducting a public hearing on LB629 and LB412. Senators present: LeRoy Louden, Chairperson; Carol Hudkins, Vice Chairperson; Tom Carlson, Mark Christensen; Annette Dubas; Deb Fischer; Gail Kopplin; and Norman Wallman. Senators absent: None. [LB629]

SENATOR LOUDEN: Good afternoon, we are ready to begin the hearings of the Natural Resources Committee. My name is LeRoy Louden, I represent District 49. To my right as I introduce the senators is Senator Norm Wallman, from Cortland; next to Senator Wallman is Senator Annette Dubas, from Fullerton. Next to her is Senator Tom Carlson, from Holdrege; and Senator Gail Kopplin, from Gretna. To my immediate right is Jody Gittins, committee counsel, and to my left is Senator Carol Hudkins, vice chairman of the Committee, from Malcolm. Next to her is Senator Deb Fischer, from Valentine; and next there is Senator Mark Christensen, from Imperial. And at the end is committee clerk, Barb Koehlmoos. Pages today are Erin Frank, from Bassett, and Steve Scharf, from Lincoln. Both are students at the University of Nebraska in Lincoln. I would ask that you turn off your cell phones or put them on silent or whatever and your pagers so that there is no disturbance of any cell phones or pagers in the hearing room while we're testifying. Those wishing to testify on a bill should come to the front of the room when that bill is to be heard. As someone finishes testifying, the next person should move immediately into the chair at the table. If you do not wish to testify but would like your name entered into the official record as being present at the hearing, please raise your hand and the page will circulate a sheet for you to sign. This list will be a part of the official record of the hearing. This year we are using a computerized transcription program and it is very important to complete the green sign-in sheets for testifiers prior to testifying. They are on the tables by the doors and need to be completed by all people wishing to testify, including senators and staff introducing bills and people being confirmed. If you are testifying on more than one bill you need to submit a form for each bill. When you come up to testify place the form in the box by the committee clerk. Do not turn the form in before you actually testify. Please print and it is important to complete the form in its entirety. If our transcribers have questions about your testimony they use this information to contact you. As you begin your testimony state your name and spell it for the record, even if it is an easy name. Please keep your testimony concise and try not to repeat what someone else has covered. If there are large numbers of people to testify it may be necessary to place time limits on the testimony. If you have a handout material give it to the pages and they will circulate it to the committee. If you do not choose to testify you may submit comments in writing and have them read into the official records. No displays of support or opposition to a bill, vocal or otherwise, will be tolerated. And if you need a drink of water while testifying please ask the page. With that we will begin testimony on the first bill, LB629 and

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Senator Cap Dierks is here to begin the opening. Welcome, Senator. [LB629]

SENATOR DIERKS: Thank you, Senator Louden, members of the committee. It's a pleasure to be here. My name is Cap Dierks, that's spelled D-i-e-r-k-s, and I'm a senator from the 40th legislative district to introduce LB629. First and foremost I want to emphasize that I believe in and support public power. It has served the state well for over the last 70-plus years. I believe the provisions of my bill today will work to keep the ownership of wind development and its profit centers within our communities working in partnership with public power. The protection of public power and rural economic development are my underlying goals with this bill. LB629 creates the Rural Community-Based Energy Development Act, commonly called C-BED, community-developed energy development act. Its purpose is to foster community-based renewable energy development initiatives designed to optimize local and regional agricultural resource economic development benefits. Local ownership of C-BED projects are designed to make wind energy farmers entrepreneurs, not renters. There are potential C-BED wind farms sized from east to west throughout my district and in many other parts of Nebraska as well. I've been in Pipestone, Minnesota, and taken others there as well where they have C-BED projects that have been in operation for several years. It was a breathtaking experience to see these projects working in these communities. C-BED projects create and support many jobs for local contractors, engineers, accountants, lawyers, bankers, and main street businesses. Under LB629, C-BED projects of more than two wind turbines are defined in part by limiting the percentage of ownership by a single qualified owner to no more than 15 percent of the project. In addition, a C-BED project must have a resolution of support adopted by the county board of each county in which the C-BED project is to be located, or by the tribal council for a C-BED project located within the boundaries of an Indian reservation. A C-BED tariff is established in LB629. A rate schedule is structured with the goal of repaying the high capital construction costs in wind energy projects. Unlike other energy-generation facilities, the vast majority of the project's costs are in construction because there are no fuel costs. A C-BED project which operates under a power purchase agreement under a tariff is not eligible for net-energy billing. Under LB629, if a Nebraska public utility is required to comply with renewable portfolio standard requirements, an RPS, the utility is required to first consider whether one or more C-BED projects are available to meet the utility's needs. You will hear testimony about the RPS in Senator McGill's bill, LB412, later this afternoon. Nebraska is at a crossroads in its energy future. With President Bush calling for 20 percent of the nation's energy generated from renewables by 2030, Nebraska must be prepared to fulfill its commitment towards this goal. The C-BED structure offers a strong viable option for Nebraska public power to diversify its energy resources and increase renewable energy generation without increasing rates or spending tax dollars for incentives. Under the C-BED structure, local citizens interested in forming C-BED projects will assume responsibility of finding private financing and will shoulder all the financial risks involved in these wind energy projects. In addition, C-BED projects are

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able to take advantage of incentives such as depreciation allowances under the tax code and to receive the federal production tax credit which is 1.9 cents per kilowatt-hour for ten years. Neither of these incentives are available to public power however. When public power enters into agreements with C-BED projects to purchase the renewable energy generated from these projects, both the public power interests and community economic interests are well-served in a way that benefits all of Nebraska. The partnership stands in stark contract to any other private sector model. In addition, these projects will be able to sell what are known as green tag credits which are the environmental attributes of generating energy through a renewable energy source. Utilities in other states which are required to generate a certain percentage of their power from renewable sources will purchase these green tag credits which they can apply to their state requirement. These credits are becoming more and more valuable as additional states adopt renewable portfolio standards. The C-BED structure established in LB629 presents a win-win-win for Nebraska. The C-BED structure, one, that promotes and protects public power. Two, promotes rural economic development and protects our rural land owners by allowing them to diversify the use of their lands as free lease of a development of an abundant, clean, renewable energy resource in Nebraska. Dan Juhl, the leading C-BED developer and expert in the country, from Pipestone, Minnesota, is here to testify today, as well as Mark Lindquist from the Minnesota project who is an expert on rural economic development from New Ulm, Minnesota. They will be able to answer any technical or other questions you may have about the C-BED structure and existing projects. I thank you for your time and I'll try to answer any questions you might have. [LB629]

SENATOR LOUDEN: Any questions for the senator? Seeing none, thank you, Senator. Do you wish to close? [LB629]

SENATOR DIERKS: I will wait and see. [LB629]

SENATOR LOUDEN: Okay. First proponent for LB629, and I would like to see a show of hands of those wishing to testify as proponents for LB629. About eight? Okay, and how about, how many would testify in opposition to LB629? Okay, thank you. Go ahead, sir. [LB629]

MARK LINDQUIST: (Exhibit 1) Good afternoon, Mr. Chairman, committee. My name is Mark Lindquist, M-a-r-k L-i-n-d-q-u-i-s-t. As is noted, I work for an organization called the Minnesota Project; we're based in Minnesota. We work on a lot of rural development issues and particularly focus on rural development where there is an opportunity to combine rural development with environmental enhancement and protection. For that reason we've been working on renewable energy policy for, oh, about 12 years now. We are also part of a group we call the Midwest Ag Energy Network and that is a group of ag leaders in the Midwest who have adopted a vision that is seeking to put 25 percent of all the energy in the American economy from renewable energy off of America's

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working lands, farms, ranches, and forests. And as we've looked at it, if America is going to meet this challenging goal, the Midwest really has to step up and the Midwest really has to outperform the national average. We really need to start thinking about and talking about energy independence broadly in the Midwest; that is we are going to at least export as much as we import into the region. And finally, as ag leaders they are understanding the issues that face rural communities and understand and want to talk about local ownership and driving local ownership forward. And so I am very pleased to be here in Nebraska today to testify on behalf of a C-BED bill. And what I would like to do is just provide some background and basic information on rural development as it relates to wind energy. We have a motto in our shop. We say, wind is good; community wind is better. When you take community ownership and put into a wind project, it's like putting a supercharger on your sports car. You are really going to ramp up the horsepower to move your development goals forward. Nebraska and Minnesota are a little bit different; we don't have public power in the same way you do. About 70 percent of our state's electricity is served by investor-owned utilities and they have two obligations. One is to serve the public, and one is to serve ratepayers. And of course the ratepayers, or shareholders and ratepayers, excuse me, and of course the shareholders are very much interested to first and foremost see that their interests are served by the utilities. We do have some cooperatives and municipals but we look at Nebraska and see this tremendous structure you have with public power, and I would suggest that C-BED and community-owned wind, in light of the structure of the federal incentives that make it hard for tax-exempt entities like power public power, to take full advantage of the federal incentives. Community wind ownership is a real opportunity to at least build on the spirit of public power. In Minnesota we have a policy that's driven wind development. We have a hair over 900 megawatts of wind on the ground operating today. If you include the municipal wind in that mix, right around 250 megawatts that is community-based, community-owned. We have another 170 megawatts that is developed by projects that aren't necessarily community-based but they are Minnesota-based corporations, and then the remaining part of the development has been developed by multinational or national corporations and developers. There is a lot of projects in the pipeline including, oh, somewhere's on the order of 100 to 150 megawatts more of community wind development. I would just point out that the investment that we've made in wind energy in Minnesota scales very closely to the investment we've made in ethanol. But our ethanol industry isn't quite as big as yours; we're running to catch up on that side. But it's about a \$1 billion investment in both cases in big round numbers. As a development driver we can look at wind in several different ways. You look at the construction. In Minnesota we've had wind construction on and off since 1994. The industry figures there's about two construction jobs per megawatt as projects are being built over a 12-month period or so, and there's expenditures in local economies on concrete and labor and hotels and all these kinds of things. But from a rural development point of view, that construction comes and goes and it's kind of a boom. From a state economy point of view, it's been pretty steady work for the industry, but from the individual rural community's point of view the ongoing

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operations and maintenance is important. If you take, say, a 100 megawatt wind farm, you can look at land rents paid to farmers and landowners, oftentimes those are on the order of \$300,000 annually. Taxes paid to local units, government and Minnesota are on the order of \$450,000 per year. The payroll is--each of these projects at that scale would create about ten pretty good paying jobs, particularly for rural parts of the state, another \$400,000 rolling into that local economy. And ultimately where the real value-added lies with the return on equity. Wind development is a lot like ethanol, they're capital intensive businesses, and we're populists in Minnesota and we like local ownership. We've done this with ethanol, we're doing it with wind. We look at this and say the big chunk of the value-added is the return on equity investment, so ownership really matters in terms of capturing the value-added. It's a little bit different than light manufacturing, for example, where there is a lot of that value-added is captured by labor and kept in that economy by wages. Wind and other energy businesses are very capital intensive, so equity captures the big bulk of that value-added. This has been intuitive. We understand that if you keep the profits, plow those profits back into the local community, this is going to be better for that local community than if those profits are taken out and put into other parts of the country, other parts of the globe. But we've gone through a number of economic analyses and it verifies what we intuitively understand. I was involved in putting one of these projects together, and Dan Juhl who will testify as well, was a primary contractor on the study in 1996 that verified what our intuitive understanding was. The Government Accountability Office of the U.S. government did the same kind of analysis in 2004 and confirmed that another U. of M. economist confirmed the same sort of conclusion again just this past year. What we know is ownership matters. Ownership matters a lot when it comes to rural development. And the other thing that I would like to highlight that is easy to see, it's intuitive but it's hard to quantify, but ownership is also a capacity-building element. When we come into rural communities in western Minnesota and southern Minnesota, we have the same issues of rural decline that I'm sure you guys deal with here in Nebraska. The plants close, there's fewer farmers, stores are closing on main street, whatnot. When you see some of this investment happen, people have a different attitude. We can now control our destiny. The other thing is you have people come into these industries and learn how to put together complex, sophisticated deals. They are oftentimes ready to go once that project is done, on the next project. And so the development cycle, when you have local ownership brings not only capital and wealth back into the community, but it builds the human capital which allows for the next project to build on the first project. And then instead of having vicious cycles of decline, you have virtuous cycles of development and rebirth. And so this is one of the reasons that we are very excited about local ownership, and as Nebraska starts contemplating participating in a renewable energy economy, that you are well-positioned to ensure that there are opportunities for local ownership and investment. Some of the other kinds of development benefits we've seen from a large and diverse industry come from the spin-off kinds of businesses. We have web developers like Dan Juhl and a whole host of other companies that are in the business of putting projects together. We have

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construction companies--M.A. Mortensen, D.H. Blattner, Truck Crane Services. Mortensen and Blattner are...one is in Minneapolis and one is a rural Minnesota-based company, but between the two of them they control 80 percent of the wind construction market, and they do that because Minnesota was out early and has a robust local market with diverse players and so they've got a competitive advantage. So it matters to have a local market if you want your supplying and supporting businesses to have a long-term role in the industries. We have other supporting industries something like Windlogics, a very high-tech meteorology company, TriCo/TC Wind, they are a generator service company. They are one of three big wind turbine generator service companies in the country. In little Litchfield, Minnesota, 8,000 people in that town, ATS trucking out of St. Cloud, Minnesota, they're moving wind turbine parts and components all across the globe. Now the port of Duluth is handling a lot of turbines; we're really excited about that. Business services, legal, finance, accounting, banking--local community banks are playing the ag credit, the farm credit services in Minnesota is playing in this game. We have new financing businesses emerging that are organizing capital that can use tax credits with local capital in making exciting stuff happen. Other Midwestern states with robust wind development are seeing manufacturing as well. This pertains a little bit more to the next bill that you'll be hearing--that policy creates markets. And then it is also policy that opens those markets up to local investment, local ownership and it's--in Minnesota, first we used some small incentives for local ownerships. It wasn't quite enough, some preferential tax treatments, standard contract prices. Then we started using some cash incentives that worked really well. We put 200 megawatts of community-based wind in the ground using cash incentives, but that got very expensive. You probably all remember the budgets that state governments have wrestled with since 9/11. And at that point Minnesota decided to look and say, how can we find some other tools to keep this moving forward? And the C-BED model is the way to do that. It puts the deal in the hands of the utilities in the project. It takes the taxpayer off the hook. But it creates the flexibility to find the resources within the deal to move projects forward successfully. It also has been driven by leadership with the governor of Minnesota standing up and saying, we're going to have 800 megawatts of C-BED, and we are going to work with the utilities until we do. So we have statute and the governor's leadership, and all of this is coming together, so we are looking at a billion dollars' worth of community-owned wind development in the next five years or so. And lessons that we've learned in Minnesota is, be sure you know it, be clear what you want. We oftentimes talked about local ownership, and then structured policy around two megawatts or smaller projects in size. But size and ownership aren't the same thing, and what's important is ownership, and that's what C-BED bills get to. Conditions are constantly changing. We need flexibility. The C-BED bill provides you with flexibility so that projects can negotiate with the utilities and do the deals so they work. And then of course leadership matters; legislative leadership and executive leadership to give the clear signal, this is what the people of Nebraska want, this is what we understand will benefit us, and let's move in that direction. And I would just like to remind you that wind is good. So I would be happy to take any questions or defer to the next testifiers.

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[LB629]

SENATOR HUDKINS: Are there any questions for Mr. Lindquist? Senator Fischer.
[LB629]

SENATOR FISCHER: Thank you, Senator Hudkins. Welcome to Nebraska, nice to have you here, Mr. Lindquist. [LB629]

MARK LINDQUIST: Thank you, it's a pleasure to be here. [LB629]

SENATOR FISCHER: With your slide presentation, I have a number of questions.
[LB629]

MARK LINDQUIST: Sure. [LB629]

SENATOR FISCHER: When you said that in Minnesota, your populace, and you are so with wind and with ethanol, can you tell me maybe the percentage of what you would consider local ownership of your ethanol plants, what percentage are, and how you would define local ownership. [LB629]

MARK LINDQUIST: In the ethanol industry we are largely looking at farmer ownership and defining that as local ownership, so we have ethanol plants that have farmers from one side and the other, and many plants have farmers. There are many farmers who invest in several plants. We have, I think, 16 ethanol plants on line right now. Of that, ADM owns the wet mill. You might all remember what happened with Minnesota Corn Processors, but the vast majority, the Kraft cheese owns a very small one, but of the other 14 I think the vast majority are either entirely or partly farmer-owned. In part, it had to do with when that industry ramped up. We have new plants coming on line that are corporate investor-owned. [LB629]

SENATOR FISCHER: That are (inaudible) corporate owned. [LB629]

MARK LINDQUIST: Yeah. [LB629]

SENATOR FISCHER: Would they...? Productionwise, are the farmer-owned plants producing as much as the corporate ones? [LB629]

MARK LINDQUIST: Oh yeah. [LB629]

SENATOR FISCHER: Great. [LB629]

MARK LINDQUIST: I should just note that because the farmers were the first people to commit to this, some of their plants are some of the older plants, and a few of them are

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smaller because they're in water constrained locations and whatnot, but we have farmer-owned plants coming on line at 50 and potentially 100 million gallons. [LB629]

SENATOR FISCHER: Okay. What about with the turbines? And I can understand wanting to have local ownership and when you say ownership matters. Who is going to invest in this on the local level? And I imagine they work with your company, then, to come in and build the turbines? Is that how this works? [LB629]

MARK LINDQUIST: They would work with a company like Mr. Juhl's. I work for an independent nonprofit. We're a policy group. We work on policy development and outreach, and so we don't actually do project development. The investors might range from a group of farmers, a group of main street business people, it might in some cases be--a few projects have been done by business people from Minneapolis. And when I say ownership matters, I do mean that a lot. But one of the things that's interesting that happens because of the structure of the federal tax credit is that there's partnerships between local investors and local equity with sort of Wall Street-financed: John Deere, Edison Capital, and some others. And so there's opportunities for locally owned and controlled and developed projects to partner and bring that extra capital in and leverage it as a resource and really ramp up their rates of returns. And Dan can give you more details about how flips work and so forth. [LB629]

SENATOR FISCHER: Okay. Just one last question then and I'll save the rest for people coming up later. In Minnesota I assume you have all private utilities since Nebraska is the only public power state in the United States, is that correct? [LB629]

MARK LINDQUIST: I believe Nebraska is the only public power state but we... [LB629]

SENATOR FISCHER: Yes. I mean but do you...you have...probably have private utilities. [LB629]

MARK LINDQUIST: ...about 70 percent of the market in Minnesota is served by investor-owned utilities, private utilities. [LB629]

SENATOR FISCHER: Okay. [LB629]

MARK LINDQUIST: Then there's co-op, rural electric cooperatives. And there's about 100 municipal utilities but they tend to be like the one that serves the town I live in of 14,000 people; they are not very big. [LB629]

SENATOR FISCHER: Oh. Well then maybe I have another question if that's okay? On a municipal utility then, if you have those in towns, do any of those have turbines? [LB629]

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MARK LINDQUIST: We have about 23 megawatts of municipally owned turbines. The utility that serves my home and my office is looking very hard at putting in about 10 megawatts itself. [LB629]

SENATOR FISCHER: And who owns that? [LB629]

MARK LINDQUIST: They're looking to see if they can make the financing work for them to own it themselves. It's not been built yet. [LB629]

SENATOR FISCHER: And then is who? [LB629]

MARK LINDQUIST: The New Ulm public utilities, I'm sorry. [LB629]

SENATOR FISCHER: Okay, thank you very much. [LB629]

SENATOR HUDKINS: Other questions? Senator Carlson. [LB629]

SENATOR CARLSON: Senator Hudkins. Mr. Lindquist, first of all let me welcome you to Nebraska. It's always good to see another Swede come and visit us (laughter). You're talking about the farmer-owned turbines. Can you give a little information, because I'm very limited in knowledge here on return on investment for the owners? [LB629]

MARK LINDQUIST: Madam Chair, Senator Carlson, as well, it's a pleasure to be here in Nebraska, I always enjoy coming here. I have seen some performance that goes as high as 82 percent rate of return for the local equity, and that's what happens when you get this leveraging of somebody bringing in that local up-front risk equity, partnering with outside equity and borrowing money, then there's leveraging. I would have to defer to Mr. Juhl who has been inside projects much more about the specifics of the financing, but we do see some very attractive rates of return. Far better than the stock market has been over the last ten years. [LB629]

SENATOR CARLSON: Okay. [LB629]

SENATOR HUDKINS: Senator Wallman [LB629]

SENATOR WALLMAN: Thank you, Senator Hudkins. I noticed you had leasing on these towers. You mean you lease the land from farmers or do you buy that or do you lease it? [LB629]

MARK LINDQUIST: Madam Chair and Senator Wallman, what typically happens is a project developer will come out, and sometimes with community-based or farmer-owned projects, if that lead farmer happens to actually have a windy piece of farmland in proximity to transmission, they can put it up on their own farm. But oftentimes there is a

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better piece of land to put it on, and so what they typically do will sign an easement or a lease with the landowners and then pay annual rents for the turbines. We often see for a two-megawatt turbine, maybe \$6,000 a turbine. Things vary from place to place, deal to deal. But that sort of 3,000-a-megawatt is a good rough number to think about. [LB629]

SENATOR WALLMAN: Thank you. [LB629]

SENATOR HUDKINS: I have a few questions if my voice holds out. Let's go back to wind turbines 101. This bill says that there would be at least two turbines per project. How much...let's say it is two...how much area are we talking about? [LB629]

MARK LINDQUIST: Madam Chair, if you are going to do a wind project, what I like to think about as sort of a rule of thumb; there's two ways to measure how much wind or space they take. One is the physical footprint on the farmland or the rangeland, and that might be a quarter-acre per turbine. But they need to be spaced out. So they need to have, depending on the prevailing winds, between three to ten rotor blade diameters apart, and as turbine size vary and get larger, that gets bigger. But generally what seems to hold is if you think about ten megawatts per section or per square mile of land, that's a handy rule of thumb to think about. So if you're going to do a 100-megawatt project, you're going to have a spacing footprint of about ten square miles. It could be tighter or it could be lesser, depending on the specifics of the topography. [LB629]

SENATOR HUDKINS: Another part of the bill says that, and this is in the statement of intent from Senator Dierks, and it says nothing in LB629 would obligate a public utility to enter into a power purchase arrangement. Wouldn't you want that arrangement before you ever start anything? [LB629]

MARK LINDQUIST: Madam Chair, oh gosh yes. There's no way to get financing whether it's with equity partners or debt financiers without having that good power purchase agreement. What...I'm understanding that Senator Dierks's bill is really modeled on the Minnesota bill, and what that bill was intended to do and that clause was intended to do is not mandate that utilities have to sign C-BED contracts. What C-BED statute intends to do is create the permission for the utilities to work with these community-based projects and have the flexibility to sign the contracts. You know, utilities have always worked hard to keep rates low for consumers whether it's because they are consumer-owned or whether it's because they have regulators breathing down their neck. But in that case, there's been some push back by utilities on community ownership because of the way you might have to structure cash flow. They say, oh, well, you know, it won't be least cost, blah, blah, blah. And so what this does is say, no, you have the permission to work with these people to structure these deals so they work for both the utility and the project. And one anticipates a lot of projects coming in and being competitive and putting their best foot forward. And so, but that was to give

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utilities comfort that they weren't going to have to sign a whole lot of high-priced community contracts before they really knew what they were going to look like. But since then we've been finding that they do seem to work for everybody involved. [LB629]

SENATOR HUDKINS: What is the life expectancy of one of these towers...turbines? [LB629]

MARK LINDQUIST: Madam Chair, I guess that would be in the range of 20 to 30 years. I think 25 years is typically identified as the expected lifetime of one of these machines, and so a 20-year C-BED contract is well within that expected lifetime. [LB629]

SENATOR HUDKINS: And then what happens after that life expectancy is over? Who takes responsibility for decommissioning, if that's the right word? [LB629]

MARK LINDQUIST: That would be the right word, and that's an important issue and that's one of the issues that does get dealt with in land use permits either by local units of government or the state of Minnesota in our case. But there's requirements for plans that the wind developer ultimately would be responsible. And typically what we expect and what we've seen in California where the wind development is 20 or 30 years old, is that as these machines hit the end of their useful life, we are seeing that the new machines are even more economical and cost-competitive, and the utilities are signing new contracts. And so what the developers do is they take down the old machines; they either sell them for scrap or they sell them to refurbishers, and then they put up new machines. And so those projects have continued life even after that first 20-year period. [LB629]

SENATOR HUDKINS: Now obviously you've got transmission lines already running through a set area. What is the maximum distance that these turbines could be located from that transmission line? [LB629]

MARK LINDQUIST: Again, a question like that I'd have to refer a little bit to Dan, but it's one of those how much do you want to pay questions. Ideally, the closer the better; the less copper, the less voltage drop; all those kinds of things. But there is plenty of windy resource area in Nebraska nearby transmission lines. [LB629]

SENATOR HUDKINS: All right, thank you. Any other questions? Thank you very much for coming today. [LB629]

MARK LINDQUIST: Thank you. It's been my pleasure. [LB629]

SENATOR HUDKINS: The next testifier in support, please. [LB629]

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DAN JUHL: Thank you, Madam Chairman, members of the committee. My name is Dan Juhl, D-a-n J-u-h-l, and I'm from Woodstock, Minnesota, which is right outside of Pipestone, which is right outside of Sioux Falls, so it's in the southwest corner of Minnesota. And I guess I've been asked to come here by John and the Farmers Union to talk about...to play off Mark's little slide of where the Mustangs; this is where the rubber meets the road. We've been involved in community-based development for quite a few years in Minnesota. Basically, we started the whole concept of community ownership. And just to give you a little background, I've been involved in this business for almost 30 years and have been involved with all of the big players pretty much throughout the world working and developing wind projects. And my family and I decided to come back to Minnesota in the '90s and raise our sons and that's when we started working on development in Minnesota. And from that we started to look at the European models and how they developed their wind resources. Their resources have all been developed basically in a community-based model. The community-based models bring such a huge thing to us...our rural communities and the fact that it's one of the few things that we've seen in a long time that can really generate really great economic development activity in the communities through job creation and the retention of the energy dollars in our communities. Minnesota is an energy-importing state; we import all of our energy, all of our uranium, all of our coal, all of our gas, all of our oil. And so we have wind which is a resource that we can develop and keep our energy dollars in our community. And we have been working on and off over the years with Nebraska Public Power and the Farmers Union and a few entities within the state of Nebraska trying to work on a project here. And from my estimation I think that the community-based development is public power. I mean if you're going to develop your natural resources in a public power state, what better thing to do than have the citizens that live in your state, in your communities, that buy the public power, make the public power? To me community-based development is the essence of public power and again, we've seen this in Minnesota. We've done...in the last few years, I think we've got over 125 megawatts that myself and my sons and my associates have developed projects in. We've created \$200 million in economic activity and we retain \$20 million a year in our little counties in southwest Minnesota and that's huge. And we start thinking about...that Minnesota now has adopted a renewable portfolio standard which is a basically 25 by 25 portfolio standards. In other words we want 25 percent of our energy to come from renewable energy resources by 2025. And if we just did half of that in community-based development, that would create billions of dollars of economic activity and retain hundreds of millions of dollars in our communities. So this kind of gives you an idea of the scale of what this can do and what this really means. And so I guess we're saying that if Nebraska wants to develop its rich natural resource of wind that you have here and you want to protect your public power, you should embrace community-based development because community-based development is public power. And so I can answer any question that you might have, hopefully. Thank you. [LB629]

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SENATOR HUDKINS: Are there any questions? Senator Fischer. [LB629]

SENATOR FISCHER: Thank you, Mr. Juhl, for being here today and welcome to Nebraska. I happen to represent the 43rd district in Nebraska which is windy, no reflection on me, of course, but it's a windy district and in fact we have the majority of the turbines in the state of Nebraska. I represent Ainsworth which has 36 and also Spring View which has two. Those were put up by public power because that's what we are in Nebraska. So when you said job creation, that this is job creation for communities, I would say yes, during construction. During the construction period it's job creation because we have a number of people filling the motels and filling the restaurants during the construction periods on those turbines in Ainsworth. But once they're up it doesn't take very many people at all to run them and to watch them because we live in a computerized age. So during the construction period, yes, it's good job creation. Not afterwards. How would you respond to that? [LB629]

DAN JUHL: Well Madam Chairman, Senator Fischer, it's true that there are many more jobs during construction but there's also ongoing jobs, I mean, it's not just the maintenance guys that physically maintain the turbines. In our community projects we have people that do the accounting, we require lawyers all the time to manage contracts and to do all those things. This is a multimillion dollar business and there's a lot of things that are ongoing with these projects. And the real value is basically what you just said, if you are going to have somebody come in and building firms in your state, they are going to come in and create some construction jobs and then they take the money and leave. The real value is keeping those dollars in our communities through local ownership. Keeping the revenue stream in the community is the key to the success of the whole program and we've seen this first hand in southwest Minnesota where we have over 500 megawatts on the Buffalo Ridge most of which are owned by Florida Power and Light, ANEXCO which is a French multinational, Pacific Farm Marketing which is a Scottish utility, and we export almost \$60 million a year in revenue streams to these states and countries that could be staying in our state if we did it right the first time. We had to learn the hard way how to do it and we are just trying to help you and hope that you see that the value is in keeping the energy dollars in the community through local ownership. [LB629]

SENATOR FISCHER: I guess I would say since we are a public power state, we benefit from very low rates of electricity. In my mind even though the jobs aren't in Ainsworth, in my legislative district, we benefit as a community because public power is a community in this state. A maintenance question...would you agree that a turbine will last 20 years? [LB629]

DAN JUHL: Madam Chairman and Senator Fischer, they're machines and what do machines do? They break. There's no if, ands, or buts about it and I'm sure Nebraska Public Power District can tell you all of their stories working with their machines, but

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yeah, they always need maintenance, it's an ongoing operation, it's an ongoing thing that you have to deal with just like any other piece of farm machinery. I mean, you don't buy a combine run it out in the field and you never have to grease the bearings or fix it. These are combines that sit 200 feet in the air and they turn a natural resource into a salable commodity and you have to maintain them. And so there is... [LB629]

SENATOR FISCHER: You know, I guess on the slide that had operations and maintenance, on the slide that we saw previously, I don't know if was referring to operation or maintenance but what was listed under that was rents, taxes, payroll. I'm a rancher you know, when I think of maintenance, I think of upkeep and that wasn't listed, so I...maybe, you know, if you don't know it, maybe somebody else down the road would happen to know, what's the cost, who pays the cost...communities? Since these are community projects, are they going to be not just paying the cost to build them, but also obviously to maintain them? I guess that's a running commentary there...but for a question. How are you going to hook onto transmission lines? As I said I'm not windy, but my district is and my gosh, we've got great winds out there. We don't have any transmission lines because we're so sparsely populated. And so we have very few places I believe where you can hook onto these transmission lines. Who's going to assume that cost? Are the power companies in this state, public power, going to be responsible for building transmission lines wherever a community may want to set up turbines...what do you see happening there? Nebraska's different than Minnesota with its power? So what do you see there? [LB629]

DAN JUHL: Madam Chairman, Senator Fischer, transmission is always an obstacle. I was just talking to Ron Asche before we came in and talking about the transmission (inaudible) the whole thing is changing and we've been building everything. The transmission lines (inaudible) our plans for 20 years. I mean, businesses, homes, everything, our demand is just going through the roof. Part of the challenge that we have also is finding how do we interface power generation into the system when there really isn't a lot of transmission lines available with available capacity? In Minnesota one step we took was that (inaudible) has been working with the utilities to do a C-BED analysis of the system where we look at the existing infrastructure of the system and see where in the system can we inject power into it for the least cost of upgrade. Because we all need (inaudible) clean power, how can we do this the most economic way and (inaudible) big wires isn't the answer, it's very, very expensive. And so we've undertaken the analysis to look at the system as it is and how and where can we install power into the system economically to support community-based development. And we've found several areas that in our state, just...our first approach is we are looking into (inaudible) hundreds of megawatts into the system with minimal upgrades. And if you live way out there where there is a lot of wind and not a lot of wires, you have to try to pick and choose what there is in the...because if you can match generation close to the load you are also better off. Because those wires go from one spot to another and (inaudible) the generation in this end is the load and if you can put generation close to

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the load you can actually save some of this stuff on the wire, some of this space on the wire and so there's advantages to doing distribution generation community-based development in planting generation close to the load and help to unlock the transmission system. [LB629]

SENATOR FISCHER: When you plan...last question, I promise. When you plan the generation and it's community-based you have a community, a group of local investors that want to do this? But yet you are going to have to get those lines to them in order for them to take advantage of the turbines that they put up. In this state, with public power...the community in Broken Bow that wants to put up turbines, when some of my other constituents in Valentine or Ainsworth or Atkinson, because they are served with public power in those areas, are paying to help what you refer to as a community-based local control group that wants to put up these turbines around Broken Bow? Wouldn't it be all of the customers of public power that are going to be helping that community benefit? [LB629]

DAN JUHL: Madam Chairman, Senator Fischer, community-based development is, you know, it's...the whole essence behind it is, is that power. If you look the power contracts that we are signing in Minnesota, that power is actually cheaper than the power that the utilities go out and buy on (inaudible) the Midwest independent systems operator that operates the transmission grid in the middle in the Midwest. And (inaudible) average rate was higher than the C-BED contracts that we are signing with the (inaudible) authorities in Minnesota. And the other side of that is that once you get the (inaudible) whole essence of the C-BED is they are front-loaded in the front years and then they are back-loaded in the (inaudible) years. And so in the front end the power is...it might not be cheaper than coal but it's not much more expensive than...it's less than gas for sure. But may not be cheaper than coal, but in the back years as you move out in time that power goes down and so how you look at it, when we did our C-BED legislation is that the front-end of these contracts basically (inaudible) billions of dollars of economic development activity creates jobs and guarantees low cost, long-term, cheap energy in the back years. Because once you get through the (inaudible) period of the contract, the first ten years, you can drop that power price down to way below market rents and still make it work. And that's why the C-BED legislation passed in Minnesota basically unanimously with a very conservative Republican (inaudible) supporting it fully because they saw the value of the economic development and the long-term (inaudible) energy that it provides to all the consumers in the long run. [LB629]

SENATOR FISCHER: Thank you, Dan. Senator Christensen. [LB629]

SENATOR CHRISTENSEN: Just a quick clarification. I think you hit on what I wanted but when you're comparing this price of the energy you are comparing (inaudible) just coal powered versus wind and gas versus wind, and not the distribution costs to bring it in from another district like (inaudible) and things that way, correct? [LB629]

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DAN JUHL: Madam Chair, Senator Christensen, I...(inaudible) compared to the costs, we compared the cost of generation and even though the (inaudible) are basically, that's very close to the load (inaudible) so there's not a lot of transmission required in most community-based projects because the power grid (inaudible) but our prices are based on the costs of generation of gas, coal, nuke (inaudible)...(Recorder malfunction, testimony lost) [LB629]

SENATOR CHRISTENSEN: That's what I understand. Thank you. [LB629]

SENATOR HUDKINS: Other questions? Mr. Juhl, I think we're asking so many questions simply because what your state does is so different from what our state does... [LB629]

DAN JUHL: Yes, ma'am. [LB629]

SENATOR HUDKINS: ...and we, last week or thereabouts, we had several bills on net metering where an individual can put up a wind turbine and then have a meter that runs both ways, and that power would provide the electricity that that particular farmer needed, or whoever it was, and then the excess would be sold to the power grid. So is this basically what you're doing too? [LB629]

DAN JUHL: Madam Chair, we do have net metering in Minnesota, but that is a different classification of...that is the ultimate consumer generation, is when the...if the consumer can produce their own energy for their own needs, that's what net metering is. But the C-BED is basically a larger commercial venture where we bring communities in. And just to go back a little bit, we have communities that are not in windy zones that don't have transmission that actually partner up with communities that are in windy zones and they become partners in community-based development, and the monies flow back to the communities, even though the turbines are not there. [LB629]

SENATOR HUDKINS: So your various power companies then would be purchasing the power from these turbine communities. [LB629]

DAN JUHL: Yes, ma'am. [LB629]

SENATOR HUDKINS: Okay. [LB629]

DAN JUHL: Yes, ma'am. [LB629]

SENATOR HUDKINS: Thank you. Other questions? Thank you very much for being here today. [LB629]

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DAN JUHL: You bet. Thank you. [LB629]

SENATOR HUDKINS: The next person in support. Welcome. [LB629]

KEITH DITTRICH: (Exhibit 2) Madam Chairman, I am Keith Dittrich, spelled K-e-i-t-h D-i-t-t-r-i-c-h. I'm a farmer from Tilden, Nebraska. I'm chairman of the board of the American Corn Growers Association, after serving six years as president for the association. I thank the committee for allowing me the time here to speak to this esteemed group and I want to present the American Corn Growers' position on...regarding the future of renewable energy in Nebraska and in the United States, and specifically our position on LB629 as it pertains to our future energy supply. Today I'd first like to give you a quick overview of our current energy situation in the nation, how renewable energy has developed to this point, and why Nebraska is so important to the future energy needs of our nation. We believe that the future...or the push for renewable energy in this country finally came out of desperation. War in the Middle East, a radical climate change that we're all hearing more and more about and that is becoming more and more apparent, and frustration over energy costs have caused policymakers and the American public to look for a new direction in energy policy. That's why we're here today, I believe. We believe that there's been a backlash from the American public because of dramatically increasing energy cost, we think caused partly out of greed from the industry and partly from demand, in conjunction with a reduced energy supply, specifically oil. There's also been a lack of foresight, we believe, by those who produce our energy and those in government who could have allowed for better planning as our fossil fuel energy sources dwindle. So today I'd like to say that, in any case, this response to the situation has happened very quickly. It came following a year when experts said world oil production has peaked, thereby offering only a...barely a hundred years of supply left in the world, and also at a time when huge chunks of the Arctic Circle were breaking away and floating in the ocean because of warming temperatures caused by excessive carbon dioxide in the atmosphere. What we have now is a race to ensure a significant supply of renewable energy to stem the flow of foreign oil into this country and to reduce our dependency on fossil fuels--probably too late, but I say better late than never. For the visionaries, such as Professor Eli Sachs of MIT, who I had the opportunity to speak with a year ago--he's a photovoltaic pioneer, solar panel gentleman, has developed the solar engineering and so forth--he professes that all of the nation's energy needs, theoretically, could be produced on 2 percent of the land mass in the nation. Two percent of the land mass has enough solar energy coming down on it to produce all of the energy needs of the nation, including transportation, industry, home heating, the works, theoretically, using 10 percent photovoltaic cells in this case. I say this to point out the potential that Nebraska has to provide renewable energy to the nation, for ourselves and to the nation. It is a huge potential. Ethanol and biodiesel are one part of that. Farmers are specifically really solar collectors. They're harvesters of solar energy, they always have been, and what we are looking at today is another way to harness that solar energy that is so abundant in Nebraska--hated in the

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summer, loved in the winter, but right now we'd like to see a little more of it. And as we watch the end of oil and convert to other energy sources that are out of our reach in the next several generations, we face the reality that the transition to our future energy sources is going to be a very rocky road and that we must depend on, through this time, sources of energy that we have the technology to produce, such as wind. We must depend on conservation and prioritization of our energy supplies. So I like to say that agriculture has been tapped on the shoulder by the American public and our government to carry us through this difficult time, and they look at farmers in rural communities and rural states like Nebraska as something that they can trust and models of our society to produce something that's good and inherently sustainable from the land and their labors. They see the rural communities who support them with the resources to produce as good places on the plant to grow families as well, and don't offer my...don't mind offering a few extra dollars to produce that kind of energy. So we believe that Nebraska has a duty and an obligation to this nation to do our share in renewable energy development, and it should be said that this task is more of an opportunity than an obligation, because of the very positive economic benefits that you've just heard today about renewable energy, and wind in particular. So we are very strong proponents of renewable energy in the country, and American Corn Growers Association has pushed very hard over quite a few years now for wind development in the nation as a whole, and we're working very hard to build that understanding. We believe that America's farmers and the rural communities that support them are a perfect fit for community-based wind farms that harness a potential to the great benefit of a rural Nebraska that is in great need of real economic development as well. We are also very strong supporters of Nebraska's public power system and believe that this type of wind farm development is the best way to capture federal production tax credits without allowing large state...out-of-state companies to come in, capture those credits, and gain a foothold in our state. And since public power does not have that ability to capture those tax credits, they have the...they have the...only option is to produce the wind power, wind energy without those tax credits, which are 1.81 or 1.9 cents per kilowatt-hour. Therefore, if they can't capture them, they're not doing a service to the state by providing the lowest cost possible power to their consumers. We have endorsed the C-BED concept of wind farm development because of the previously stated benefits to all involved in production, distribution, and consumption of this power. I have personally been on Dan Juhl's wind farm and in his area of Pipestone, Minnesota, which is incredible, and I've seen the vastness of the wind fields and the positive benefits to the rural communities in a little town called Pipestone, Minnesota, only five or six hours from here. We are very excited about this prospect for Nebraska and hope this esteemed committee sees to it this legislation moves forward, and you can be assured that we will do everything we can to assist you in the endeavor, if you see fit, and work towards our goal of better profitability for Nebraska's farmers and rural communities. And we sincerely hope that you will join us in this effort to help us build a community of energy producers who do what it right and good for our earth and its inhabitants, and let us in Nebraska lead the way to make our energy system one that is

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diverse, decentralized, and domestic, as well as renewable, and is a shining example of what can happen when government and small business come together towards the common good. And I'll leave it at that. I thank the committee again for allowing me the opportunity and certainly would answer any questions you might have. [LB629]

SENATOR HUDKINS: Are there questions? Senator Fischer. [LB629]

SENATOR FISCHER: Thank you, Senator Hudkins. Welcome, Mr. Dittrich. Nice to have you here today. [LB629]

KEITH DITTRICH: Thank you. [LB629]

SENATOR FISCHER: Can you give me a short answer on how a C-BED works in this bill? [LB629]

KEITH DITTRICH: Yes. Madam Chairman, Senator Fischer, C-BED is a system that allows an umbrella entity, an LLC, form with a group of small investors under that umbrella who may have also their own LLCs. It could be a farmer, a group of farmers, a community, a group of businessmen, whoever is interested in it. They would contract, this umbrella would contract with the public power system a power purchase agreement. Then they would go out and try to finance a wind field as a group, which is about roughly \$1 million per megawatt. So the standard right now is a two-megawatt tower, a \$2 million tower. How can I do that? How can I do that as a farmer? Well, I can't, so I look to an outside investor who...financier who has the interest in financing this project and who has the need for the production tax credit, which is nearly two cents a kilowatt, which is a huge tax credit which my farm operation or anybody in my local community has no need for that size of tax credit. In return for that tax credit, they're willing to finance the vast majority of the project, a huge, high, high percentage of the project, and then use that production tax credit and own, in a sense, own the majority share of that project for the first ten years of the life span of the production tax credit. As that tax credit dwindles down and ends at the end of ten years, the financier has no interest in the project. At that point he cannot access the tax credits, they're gone. The ownership flips to the local investor, where he owns 99 percent of the project--I believe Mr. Juhl could answer that better, the exact percentage--but he owns the project, owns the paid-for tower that's paid off in ten years, has been protected over the ten years with a purchase...a maintenance contract which is built into the spreadsheet of the costs and the cash flow for the spreadsheet, so there's no...and there's insurance on the project, because the financier will demand all of that. They're not going to go into business with me and take any risk with me if every T isn't crossed, if they're not completely protected, and I don't want to take the risk of a \$2 million tower that could get knocked down by maybe a windstorm or an ice storm or something somewhere down the line, and I could be liable for it and take my farm down. So it is a complete package that has been ingeniously developed that covers all the bases, protects everyone, and finds a way to

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capture that production tax credit, which is very valuable. [LB629]

SENATOR FISCHER: Do you know the average life span of a wind turbine? [LB629]

KEITH DITTRICH: I'm of the understanding of about 25 years, and I think what we're talking about is a very good machine that, depending on the maintenance that you give it, no different than my combine, is a question of how long it will last. But... [LB629]

SENATOR FISCHER: Under this proposal then, I believe you said the tower is paid off in ten years and then the ownership flip-flops. So would you anticipate that the maintenance costs would also flip-flop after ten years and would be higher in the down years, the off years? [LB629]

KEITH DITTRICH: Certainly, as in any piece of equipment that I have on the farm, that maintenance is going to go up. It is... [LB629]

SENATOR FISCHER: Wouldn't that be a concern for an individual investor in dealing with this project? [LB629]

KEITH DITTRICH: Not given the returns on the tower after the first ten years, after the debt is paid off. That is not a concern to me after seeing the profits that are generated or the income that is generated from that tower. [LB629]

SENATOR FISCHER: Do you know how long the C-BED project has been in effect in Minnesota and is it...are there other states that are doing it? [LB629]

KEITH DITTRICH: As far as I know, Minnesota has developed that model. I don't know if it's gone beyond that. I, off the top of my head, I believe they're in their eighth year of the project. [LB629]

SENATOR FISCHER: Okay. Thank you. [LB629]

KEITH DITTRICH: Very welcome. [LB629]

SENATOR HUDKINS: Other questions? Senator Carlson. [LB629]

SENATOR CARLSON: Senator Hudkins. Keith, what kind of, whether it's population or number of households or whatever, does a megawatt serve? [LB629]

KEITH DITTRICH: Senator...or Madam Chairman and Senator Carlson, I think about 200, I've heard the number of about 200 households, but... [LB629]

SENATOR CARLSON: Per megawatt? [LB629]

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KEITH DITTRICH: ...but I'm not...300. [LB629]

SENATOR CARLSON: Thank you. [LB629]

SENATOR HUDKINS: Are there other questions? [LB629]

SENATOR CHRISTENSEN: I'd take one. [LB629]

SENATOR HUDKINS: Yes, Senator Christensen. [LB629]

SENATOR CHRISTENSEN: You mentioned solar energy and taking only 2 percent of the mass. How's that compare pricewise with wind and with coal and...? [LB629]

KEITH DITTRICH: Madam Chairman and Senator Christensen, Professor Sachs said that the only reason that solar energy hasn't been developed to its full potential is because at that...this was about a year and a half ago, before coal had started moving up, but he said it was about twice the cost of coal at that time. But, you know, when you...that is not quantifying the environmental aspects of producing coal and the fact that many parts of our north and of the Great Lakes a woman, a pregnant woman, or a small child is not recommended to eat the fish from any body of water because of the mercury contamination from coal power generation. [LB629]

SENATOR CHRISTENSEN: Thank you. [LB629]

KEITH DITTRICH: You're welcome. [LB629]

SENATOR HUDKINS: Other questions? Thank you very much. We appreciate your testimony. [LB629]

KEITH DITTRICH: Very welcome. [LB629]

SENATOR HUDKINS: Next person in support, please. [LB629]

MARTIN KLEINSCHMIT: (Exhibits 3, 4) Good afternoon, Madam Chairperson and fellow committee members. My name is Martin Kleinschmit, M-a-r-t-i-n K-l-e-i-n-s-c-h-m-i-t. I'm here representing myself and also the Center for Rural Affairs. I'm a farmer from Cedar County. That's the east edge of Senator Dierks' district. I'm also a consumer, a customer, and a strong supporter of public power. I'm a former director of the Cedar County Knox...the Cedar-Knox Public Power District, so I understand public power, its distribution system, its needs, and it's their goal to serve customers with low-cost, reliable power. I also understand that the public power system was organized and designed to provide power at a low cost of production, mainly to avoid the need to

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provide dividends for investor-owned companies, power companies. I'm also a member or was a member of the steering committee for the National Assessment of Climate Change for the Great Plains Region and there I learned the importance of pollution-free power generation. So it's with this background that I come here...or it's with this background I came here to talk to you, and also the reason I was part of an effort by the Nebraska Farmers Union and the American Corn Growers to bring forward a pilot project to Nebraska Public Power to develop a 40-megawatt wind generation development. It was supposed to be the first one in the state and, obviously, a pilot project that we could all learn on. So the project was proposed as a model to show how public power systems in Nebraska could partner with private individuals and community organizations to generate environmentally friendly energy at a price equal to or below the cost of production of the public power, and at the same time creating a much-needed economic boon for the rural area. What it did is it combined the economic incentives of the federal production tax credit program with the community-based economic development model. This project would have brought an outside investor of sorts, although I like to call them equity owner, and I'll talk about that later, but it would have brought \$50 million worth of machinery and construction to the state of Nebraska at no cost to public power. It would have generated \$2.8 million in sales tax receipts, and the local community could have gained over \$6 million in property tax revenue. This is the economic development and construction activities from only one 40-megawatt development and it would have also, by the way, produced over 114,000 megawatts of pollution-free energy for the state, which is also pretty nice. The production tax credit model is not available to public power, but what it allows is equity partners--and this is the difference between owners and partners, and I'd like to stress that--they would provide the up-front money to construct and purchase the machinery. For that, as was stated earlier, they would receive a production tax credit from the federal government of 1.9 cents for each kilowatt-hour produced for a ten-year period, because at the end of ten years that production tax credit program expires. So these folks are not really investors, but they're owners of these turbines that they bring to the state, and they get their return on their investment from the production tax credit model program, not so much from the power that's sold to the ratepayers of the state of Nebraska. After ten years, the ownership flips, and you've heard that before, and then the local C-BED owners, who typically own 1 percent of the project, continue to sell power into the system. But since the system is totally paid for, they're not really responsible for the...and they are only responsible for the maintenance and upkeep of that system, and don't have to really put money into the construction and purchase of these wind turbines. So...and typically these C-BED models then generate six times more economic development than other ownership models because the equity partners, that is the C-BED partners, are owners of it; again, they're not investors. They're selling power to the public power system, the same people that they buy the public power from. Okay. This project got off to a pretty good start, but then it kind of bogged down, as you all know, and unbeknownst to us one of the local school districts got wind of this and they were planning on how they could merge, three districts could merge together, build

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one new building strictly from the revenue from the taxes on this wind turbine site. And obviously that didn't work, so now they're still struggling to try to meet their budgets and nobody has enough money to build a new building. What C-BED does, it makes public participation possible while benefiting the whole state. C-BED restricts how much ownership is available to any individual, and limits participation to residents of the state, giving more opportunity for financial gain and increasing the opportunity for many to partner with the public power system, the same system that serves the public. The C-BED model is foreign, in itself, just as having any kind of power generation other than public power is also foreign, so this is a lot...a lot of things to look in, a lot of changes. But I think it's worth the effort because what we're getting is clean power owned by people in Nebraska. We don't have as much money leaving the state for coal or whatever to power the present systems. And as Dan talked about, we have a system that we can sign a contract for 20 years, a 20-year contract for cheap renewable power. I think this wind energy and the C-BED model is an opportunity that the state can no longer ignore. Wind power can...wind can generate power under any ownership model, but with C-BED we get the energy and the economic development, and I think both are needed in Nebraska. Thank you. Questions? [LB629]

SENATOR HUDKINS: Are there questions? Senator Wallman. [LB629]

SENATOR WALLMAN: Thank you, Senator Hudkins. And thank you for coming. Most the times farmers don't come in here. I'm a fellow farmer myself. And so this project you think would work for, like, a school district too? You mentioned school districts. [LB629]

MARTIN KLEINSCHMIT: Uh-huh. You bet. [LB629]

SENATOR WALLMAN: And our school district is along a transmission line, and so we could sell this to outside investors on our school property, you're saying? [LB629]

MARVIN KLEINSCHMIT: And I'm not sure of that because of the school district probably is not a public...or is a public owner, is that correct? So it has to be just individual, and that's...those are the laws of the production tax credit, not the C-BED. [LB629]

SENATOR WALLMAN: Okay. Thank you for showing up. [LB629]

MARVIN KLEINSCHMIT: You bet. [LB629]

SENATOR HUDKINS: Other questions? Senator Fischer. [LB629]

SENATOR FISCHER: Thank you for being here today. I have a question on you brought up school districts in your testimony, too, and I'm reading it here, and have there been school districts that have participated in this? Can political subdivisions take

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part in this and can they...can a public entity partner with a private entity? [LB629]

MARTIN KLEINSCHMIT: I don't know that, Senator, Madam Chairman. What the...what I'm stating in here of how the school district was involved, these turbines would have been taxed as, you know, as personal property because they're not publicly owned. They would have been taxed as personal property is now, and then that revenue would have gone into that school district. Okay? [LB629]

SENATOR FISCHER: Okay. [LB629]

MARVIN KLEINSCHMIT: It's the taxes on the equipment. [LB629]

SENATOR FISCHER: Yes, I see now. When you were discussing the school district and the mergers with three school districts, I thought that had already taken place and they had owned it. [LB629]

MARVIN KLEINSCHMIT: Oh. No. [LB629]

SENATOR FISCHER: But you were just...as an... [LB629]

MARTIN KLEINSCHMIT: Yeah, they were making a plan on, yeah, they said... [LB629]

SENATOR FISCHER: ...as an example then. Oh, okay. Okay. [LB629]

MARTIN KLEINSCHMIT: All three districts are struggling with, you know, low buildings and... [LB629]

SENATOR FISCHER: As an example. [LB629]

MARVIN KLEINSCHMIT: As an example. [LB629]

SENATOR FISCHER: Okay. [LB629]

MARTIN KLEINSCHMIT: So they made a plan to have this happen and, by golly, this would be great because we're going to get all this money and we're going to build a new building,... [LB629]

SENATOR FISCHER: Right. [LB629]

MARTIN KLEINSCHMIT: ...we'll merge and everything will be great. But then... [LB629]

SENATOR FISCHER: Okay. [LB629]

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MARVIN KLEINSCHMIT: ...we were unable to follow through with the development project so they... [LB629]

SENATOR FISCHER: Okay. On the handout you gave us from the Center for Rural Affairs,... [LB629]

MARVIN KLEINSCHMIT: Uh-huh. [LB629]

SENATOR FISCHER: ...you gave that to us. In the first paragraph it says, "Without a C-BED initiative, the vast majority of new renewable power projects are owned by large, remote companies whose primary connection to the local community is the desire to extract the resource." I don't believe that applies here in Nebraska, even though this came from the Center for Rural Affairs. Could you make a comment on that, please? [LB629]

MARTIN KLEINSCHMIT: I could try. I think what we're...Jon Bailey, our policy analyst, put this together, and what he...I guess the model that we saw in Minnesota and some in Iowa as well, too, as Iowa is not a public power state so it doesn't quite apply, but the wind turbines are there and I think 98 percent of those are owned by an outside company, out-of-state company, as a matter of fact. So the point of the sentence was that the real revenue, the real wealth from these turbines was leaving the state because the power was purchased...power probably stayed in the state, but was purchased from Florida Power and Light or one of those other ones, see? [LB629]

SENATOR FISCHER: But I guess I would respectfully disagree with the statement from the Center for Rural Affairs that I quoted earlier. You know we have public power here... [LB629]

MARVIN KLEINSCHMIT: I do. [LB629]

SENATOR FISCHER: ...in Nebraska. We are the owners of it. It is not some large, remote company that is pillaging our resource. [LB629]

MARVIN KLEINSCHMIT: Oh, absolutely right. [LB629]

SENATOR FISCHER: So I just wanted that on the record. Thank you. [LB629]

MARVIN KLEINSCHMIT: Oh, okay. And I think that was, Senator, we were talking about whether it could happen. This is why a C-BED is so... [LB629]

SENATOR FISCHER: But this...but this bill is for Nebraska. [LB629]

MARVIN KLEINSCHMIT: It is. [LB629]

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SENATOR FISCHER: It does affect Nebraska and the statement was made by the Center for Rural Affairs from Nebraska, so I wanted it on the record. Thank you. [LB629]

MARVIN KLEINSCHMIT: Okay. Yes, sir. [LB629]

SENATOR HUDKINS: Are there other questions? Thank you for your information. [LB629]

MARTIN KLEINSCHMIT: Thank you. [LB629]

SENATOR HUDKINS: Next supporter, please. Mr. Winston, welcome. [LB629]

KENNETH WINSTON: Good afternoon, Madam Chair, and members of the Natural Resources Committee. My name is Kenneth Winston, last name is spelled W-i-n-s-t-o-n. I'm appearing on behalf of the Nebraska Chapter of the Sierra Club, and I'm in the ironic position of the person from the Corn Growers talked about all the environmental issues that I wanted to talk about, so I won't cover that. Actually there was one...there was a question about whether a political subdivision could be an owner, and that is spelled out in the bill. So I believe it's sub (e), (4)(e) on page 3. So, I'm sorry, I'm nearsighted or, you know, I need bifocals fixed. Just quickly, the Sierra Club supports LB629 because it provides a mechanism for renewable energy development and rural economic development in the state of Nebraska, and I think what I wanted to talk just a bit about is a little bit of a personal aspect. I think it's something that we all know about but I just want to talk a little bit about it just because it hasn't been mentioned yet. I guess I'll tell you a little bit about my own story. I grew up in Senator Louden's district, in the town of Rushville, and when I graduated from high school there were 54 students in my graduating class. A couple years ago my high school was consolidated with a school down the road, which was one of our big rivals when I was going to school, but the last graduating class of Rushville High School was 14 students. And I guess I just want to throw that out as an example of why economic development is so important in rural Nebraska and would like to encourage the committee to think about that and that perspective, that we need to provide opportunities for our young people to stay in the state of Nebraska. Thank you. [LB629]

SENATOR HUDKINS: Thank you, Ken. Senator Kopplin. [LB629]

SENATOR KOPPLIN: Thank you. Ken, as an attorney, do you see any problem constitutionally to limiting this to Nebraska residents when it could deal with interstate commerce? [LB629]

KENNETH WINSTON: Well, that could be an issue and I certainly would be willing to examine that aspect in terms of, if the bill needs some further definition in order to avoid

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that issue, I would certainly be glad to work with the committee on that. [LB629]

SENATOR KOPPLIN: Okay. Thank you. [LB629]

SENATOR HUDKINS: Senator Christensen. [LB629]

SENATOR CHRISTENSEN: That 1.9 cents... [LB629]

KENNETH WINSTON: Uh-huh. [LB629]

SENATOR CHRISTENSEN: ...we're talking about, that's a federal credit, correct? [LB629]

KENNETH WINSTON: That's correct. [LB629]

SENATOR CHRISTENSEN: Now is that allowed within this sub, you know, you mentioned this (4)(e) on page 3. Is...even though it's listed here as the political subdivisions can do this, is that listed in the federal bill that way? [LB629]

KENNETH WINSTON: I don't believe so. I believe...I don't believe that they would be eligible for the federal production tax credit, but I believe what you have is the equity investor. For example, the John Deere Corporation that would be the equity investor, would reap that federal tax credit. [LB629]

SENATOR CHRISTENSEN: All right. Thank you. [LB629]

SENATOR HUDKINS: Other questions? Senator Fischer. [LB629]

SENATOR FISCHER: Thank you, Senator Hudkins. Always good to see you, Ken. Thank you. [LB629]

KENNETH WINSTON: Thank you. [LB629]

SENATOR FISCHER: I had made a note on page 3 there under (e) and I guess my question would be, yes, we can have political subdivisions enter into this; they don't qualify the tax credit. Can they do this with a private entity? Can a school do this with John Deere? [LB629]

KENNETH WINSTON: As I understand, as long as they're part of the consortium that puts together the plan, then John Deere provides the financing. It would be like they would be the limited partner, as it were, and then the financier would be John Deere. John Deere would get the tax credit, and then at the end of the ten years then they would be one of the owners, the outright owners of the project. [LB629]

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SENATOR FISCHER: Do you know why under that same section of the bill there a municipal electric utility or a municipal power agency was excluded? [LB629]

KENNETH WINSTON: That I do not know. I did not draft this bill, so... [LB629]

SENATOR FISCHER: Okay. [LB629]

KENNETH WINSTON: ...I can't answer that question. [LB629]

SENATOR FISCHER: Thank you. [LB629]

SENATOR HUDKINS: Other questions? Thank you, Ken. [LB629]

KENNETH WINSTON: Okay. Thank you. [LB629]

SENATOR HUDKINS: Next person in support, please. [LB629]

JOHN DITTRICH: (Exhibit 5) Madam Chairwoman and members of the committee, I am John Dittrich, J-o-h-n D-i-t-t-r-i-c-h, and I'm here to support what I view as a very positive piece of legislation for Nebraska, LB629, the Rural Community Energy Based...Rural Community Based Energy Development Act. The name of the act is very self-explanatory, I think. I'm a farmer from Madison County, operating an irrigated grain operation in partnership with my brother Keith, who you've just heard from. I'm vice president of the Elkhorn Valley Schools board of education, and I'm also vice president and the principal organizer of the Tilden-Meadow Grove Community Foundation, which is affiliated with the Nebraska Community Foundation. In addition, I'm a longtime policy analyst for the American Corn Growers Association and Nebraska Farmers Union. Today I'd like to support this bill from the perspective of a farmer, a local school board official, and a representative of a rural community development initiative. First, as a farmer, I'm a strong supporter of public power in Nebraska. Our unique system has provided reasonably priced electricity and excellent service through our local Elkhorn Rural Public Power District for our farm for many years. We've always depended on electric motors for much of our irrigation needs as possible. At this time of high and unstable diesel, natural gas, and propane prices, electric power provides the only stable and reasonably priced alternative for irrigation. Costs for diesel power units can run up to \$90 per acre higher than electric service. There's a great need for more electric conversions of irrigation wells in our area and across Nebraska. However, the waiting period for new installations in my area is three to four years, and I know it's much longer in many areas of Nebraska. It's clear we require new power generating capacity in the state to meet this very underserved demand. Nebraska has huge agricultural capacity, with production capabilities equaling the best in the U.S. Corn Belt. However, this productivity is heavily dependent on low-cost irrigation energy sources. And our state

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will become, I think, increasingly uncompetitive with other Corn Belt states, such as Iowa and Illinois, which have similar production capabilities but don't have to irrigate. So there's a great need for something new to serve the pent-up demand for electric irrigation service. From the basis of a farmer, this is important to me. Nebraska-based wind energy development seems to be the lowest cost and the most environmentally friendly method to quickly increase our generating capacity. The C-BED model that LB629 legislates also seems to be the best model for developing our local wind resources across the state, through local private partnerships with our public power system. Those local partnerships allow the public power system to take advantage of the federal production tax credit to lower wind development cost. C-BED then allows us to fix current power rates for 20 years, which is a unique opportunity that's available through no other generation source. In addition, the model will allow rural communities to keep the profits resulting from new power generation in local hands. Many farmers will find that the wind blowing above their farm is just as valuable, or even more so, than the crops grown on the land below. As the country and the world look to farmers to solve our energy insecurity problems, C-BED could be a sort of "closed-loop" system for Nebraska farmers, where they use the renewable resource blowing above their farm to produce more renewable energy from the crops below. As a local school board official and from that perspective, I see the C-BED model as being an opportunity to provide economic development to increase our student population, as a resource to lower dependence on local property taxes. Our school district faces the same problems that many rural districts face across the state. These are declining or stagnant student populations--stagnant would be a positive anymore, most of them are declining, sharply declining state aid to education, and rapidly increasing reliance on local property taxes to fund education. C-BED wind projects could add huge new valuation bases or other tax bases to school districts they're located in, thereby reducing the reliance on farmers, local homeowners, and local businesses to fund education, and ownership by school districts it not out of the question, as Senator Fischer has talked about. I'm certainly interested in that possibility and this legislation seems to be able to allow that. In addition, C-BED projects would provide economic activity and jobs to rural communities attracting new residents. These large and highly visible projects could provide a sense of optimism for the future of small towns, pulling in young people with children to repopulate our schools and lowering the per-pupil cost of education. As a representative of a local community development foundation, I see great potential for partial ownership of C-BED wind projects by foundations and rural community nonprofit entities. I have a vision of wind turbine ownership by community development foundations across the state, providing them with a stable and long-term income stream. These dependable income streams, used in conjunction with the economic development resulting from local C-BED wind projects, could be used to leverage other economic development efforts in ways that we now can't probably fully appreciate. Finally, I would ask the committee to consider the downside risk to our public power system and to rural development potential if alternative private models are used to develop Nebraska wind energy. Clearly, there are many large, well-funded out-of-state investors or utilities that

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wish to tap into the vast potential of Nebraska's wind resources. Like C-BED, these large private interests also offer the public power system a way to tap federal production tax credits. However, do their self-interests dovetail with the mission of the Nebraska public power system? I don't think so. I think that, in general, their incentive is to move wind-generated power out of the state to higher priced markets. Alternatively, their incentive may be to weaken the Nebraska public power system in order to increase rates within the state and/or to sell outside the public power system to enhance their profits. Within the political process, we're all aware of the rule of unintended consequences. If we do not use the C-BED model, but instead encourage public power to partner with these large and powerful private entities, how long will it be before Nebraska's unique system is undermined for the benefit of a few? Nebraska's C-BED model offers a decentralized system of local, private, and nonprofit ownership to partner with public power and to gain the benefits of federal production tax credits. I do not see such a partnership with local, private, and nonprofit ownership to be a threat to public power, but indeed exactly the opposite. I'd like to thank you for the opportunity to testify and I'd sure like to answer any questions you have. [LB629]

SENATOR HUDKINS: Thank you very much. Are there questions? Seeing none, thank you very much for being here. [LB629]

JOHN DITTRICH: Thank you. [LB629]

ROBERT BYRNES: Good afternoon. My name is Robert Byrnes, spelled B-y-r-n-e-s. I'm here to testify in favor of LB629. I'm the owner of Nebraska Renewable Energy Systems located in Oakland, Nebraska. I'm president of the Nebraska Renewable Energy Association, and a small wind turbine owner. I think the development of C-BED is very important to ensure that citizens of Nebraska are given the best possible opportunity to benefit from the rich wind resources that we possess. As with any other renewable energy opportunity that Nebraska has, local ownership matters tremendously when it comes down to how much of that return stays in the state and in the local economy. We cannot expect to own or share in the profits of large companies that local facilities in Nebraska, yet we continue to incent them into building here. We seem to be satisfied with the jobs and tax base that will be generated. When it comes to our natural resources, we need to guard the store very closely and ensure that citizens of Nebraska have a stake in the utilization of that resource that belonged to us and our children. If we do not wisely utilize these resources at this early stage of wind energy development, this resource will be exploited with little benefit to the citizens, both now and in the future. Public power has expressed a willingness to develop wind energy projects as exemplified through the wind farm in Ainsworth; however, they will not be able to capitalize on the major federal incentive that exists--the production tax credit. Proper development of this resource using a mix of public power, community-based, and private partnerships is needed, and the C-BED program offers a proven, tested path to ensure the communities have a stake in this development. I strongly encourage the

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adoption of LB629 to establish the C-BED model. [LB629]

SENATOR HUDKINS: Thank you, Mr. Byrnes. Are there questions? Senator Carlson. [LB629]

SENATOR CARLSON: Senator Hudkins. Robert, there's nothing wrong with this if it ends up being a pretty good advantage for you, but in your operation how do you see this being an advantage to you? [LB629]

ROBERT BYRNES: Well, to me personally, it would give me the opportunity to make a investiture, just like any other investiture, in a renewable project, whether it's a biodiesel project or an ethanol plant or a wind energy project. If a large corporation comes in with all of the resources to do these things, I don't have an opportunity to be part of that project. A C-BED project would accept investiture from the community, who become owners in that project. Out-of-state or corporate ventures, you know, that put up an ethanol plant or a biodiesel plant, they don't ask the community for money; they just do it. And that money goes to wherever that money ends up, and typically it's not in Nebraska, and it's certainly not in that community. [LB629]

SENATOR CARLSON: Thank you. [LB629]

SENATOR HUDKINS: Other questions? Thank you very much for being here. [LB629]

ROBERT BYRNES: Thank you. [LB629]

SENATOR HUDKINS: Welcome. [LB629]

GALE LUSH: Madam Chairman, Senators, my name is Gale Lush, spell it G-a-l-e L-u-s-h. I'm from Wilcox, Nebraska. For those who do not know where Wilcox, Nebraska, is, that's in the Republican River Basin. You've probably been hearing about that in the news and you'll probably be seeing another group of us coming down in two weeks to meet you all over again. But everyone else has talked about production tax credits and depreciation and all these credits that we can bring back to the farm, and that's all well and good. I'm going to talk about water, because that's something near and dear to my heart and something that's important in our area. And I found a pamphlet that was prepared by the Wind Powering of America Fact Sheet and it talks about the wind and water nexus for power plants. In the year 2000 the largest category of water withdrawals was thermoelectric power, accounting for 48 percent of total withdrawals in the United States. The primary use of the water at plants is for condensing steam or cooling steam back into water. Water is also used in thermoelectric power plants to generate electricity, purge boilers, wash stacks, although new appliance recirculate water or use dry cooling, once-through cooling methods are the most common technology in use. And in the year 2000 an estimated 195,000 million

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gallons per day, or 219 million acre per feet per year, were withdrawn for thermoelectric power. I sure wish we had some of that in the Republican River Basin. And they say the least efficient water-cooled plants use as much as 50 gallons of water per kilowatt-hour use. And before this year, on my farm we went all electric at my house, which I think was a good thing. Unfortunately, we had an ice storm that where I was unable to have power of any sort for two weeks and that was a little bit of an inconvenience, so I am for power, I am for public power, and...but in my situation, 50 kilowatt-hours, I remember getting a bill for 4,000 kilowatt-hours one month and that would be, figuring their...using their figures for the least efficient plant, which might be like Gerald Gentleman, which is 50 to 60 years old, that would be almost 200,000 gallons per month that someone has to withdraw from the earth to cool those plants or clean them or condense the steam. And if you figure that over 12 months, that's almost 2.4 million gallons. Now take that times the whole state, or a small town, and that is a lot of water. And as this pamphlet said, 48 percent of all the water withdrawn in the United States goes to produce electric generation, and that's something to keep in perspective because our area of the state has been in a drought since 1998. It is so dry, Lake McConaughy, I don't need to tell you about it, is nearly dry. It's only got 20 to 30 percent capacity. But it's so dry that Gerald Gentleman may...NPPD, our Nebraska Public Power District, has drilled high-production irrigation wells by Sutherland just in case they run out of water in Lake McConaughy. So water is very important and, of course, wind doesn't use it. We do not need it. We don't need it...you need it for nuclear, you need it for coal. Any new generation should consider wind. It's very important. Also, I'm...and as I said, I'm from the Republican River Basin. The Governor, at a meeting in McCook, through his DNR representative Ann Bleed, told a group of farmers that 400,000 acres out of 1.2 million acres would have their water use reduced to 2.4 to 4.8 inches, which almost puts them out of economic...puts them out of economic existence at this time. And if that happens, we need not only to look at electrical generation that doesn't use so much water, but we need a new cash flow for the farmer out here in rural Nebraska. These turbines would produce a lot of revenue for the farm. We need a new cash crop. And we have transmission lines and we've...and in the project that some of the people have referred to that would...that we were working with, the Nebraska Public Power District, we have worked with our public utility people and tried to site the C-BED or turbines in the proper areas so that it will do the most good, and in our project we were always willing to bring in the local landowner and, even if he was apprehensive, teach him that he could invest in this without losing the family farm or his first born, as he would do under some situations, and we'd do it so it would be profitable. And if it couldn't be done profitably, it wouldn't be done. But as far as the mission of public power is concerned, I remember my grandmother telling me how things were before 1947 when REAs came in. Investor-owned utilities would not come out to the rural areas because, they said, it's too far, too unprofitable. Besides, farmers, they get up with the dawn and they go to bed with the sun, and if they really want to read at night they can get a lantern. Well, that's not quite true anymore. I miss my big-screen TV. My computer burned out when the lights flickered out and I was a little...and it took awhile to find that generator that we had

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in the back of the shop, but...and I really didn't want to run that diesel tractor. That's kind of expensive. But wind is very efficient, it's good, and it's going to provide a new cash flow for rural areas, and also it's not going to use any water, and I think that's something we need to consider and hope you put that in your deliberations. And I would urge you to support LB629. [LB629]

SENATOR HUDKINS: Thank you, Mr. Lush. Are there questions? Senator Christensen. [LB629]

SENATOR CHRISTENSEN: Thank you. You're speaking my language on water. Thank you for coming, Gale. What was your comment there, 48 percent of the nation's water is used for electric plant? How was it worded that? [LB629]

GALE LUSH: Yeah, 48 percent of the total withdrawals in the United States was used for thermoelectric power. That's quite a bit. [LB629]

SENATOR CHRISTENSEN: Thank you. That's all I have. [LB629]

SENATOR HUDKINS: Other...Senator Carlson. [LB629]

SENATOR CARLSON: Senator Hudkins. Gale, I got to get on the same page with you here just so that I grasp what you said. We talk about ethanol and water use. We got three gallons, four gallons, maybe down to two gallons if it's recycled... [LB629]

GALE LUSH: That's true. [LB629]

SENATOR CARLSON: ...and used properly per gallon of ethanol. How many gallons per megawatt of electricity? [LB629]

GALE LUSH: Well, it...kilowatt. That's a little lower. [LB629]

SENATOR CARLSON: Okay. All right. Okay. [LB629]

GALE LUSH: Fifty gallons. [LB629]

SENATOR CARLSON: Okay, how many? [LB629]

GALE LUSH: Fifty. [LB629]

SENATOR CARLSON: Fifty, okay. [LB629]

GALE LUSH: That's for the more inefficient ones, probably the older ones like the ones at Sutherland. That's a rather old plant. But the newer ones that were built would

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probably be better. But they all need it and the nuclear needs it, as we all know. The Missouri River had a drought, too, in the upper reaches and if we have a severe drought this year, there might be a problem getting enough water out of the Missouri to cool some of the nuclear plants. Have to talk to our public power people about that, but that's something...it's kind of scary when you think about it. [LB629]

SENATOR CARLSON: Now 50 gallons per kilowatt, and I don't know this so I'm asking, where did that water go? [LB629]

GALE LUSH: Oh, up in the air as steam. It cools plants. It's used to wash them, the stacks, a number of things, so... [LB629]

SENATOR CARLSON: Well, if it was used to cool, some of it would be recycled back into the system. [LB629]

GALE LUSH: Yeah, it would be recycled, yeah, just like ethanol. [LB629]

SENATOR CARLSON: Okay. [LB629]

GALE LUSH: I know KAPPA uses some of the water they use to cool. It goes into a lagoon and then it goes gets pumped into a cornfield. So it gets used, but it's still...that's considered consumption, so... [LB629]

SENATOR CARLSON: Okay. [LB629]

GALE LUSH: ...that's what you got to look at. [LB629]

SENATOR CARLSON: Thank you. [LB629]

GALE LUSH: Sure. [LB629]

SENATOR HUDKINS: Other questions? Thank you. [LB629]

GALE LUSH: Thank you, Madam Chairman. [LB629]

SENATOR HUDKINS: Appreciate your testimony. Is there anyone else in support? And, Senator Louden, I'll let you have your committee back. [LB629]

SENATOR LOUDEN: Well, thank you, Senator Hudkins. Your voice sounds in find shape. [LB629]

SENATOR HUDKINS: Yeah. [LB629]

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JOHN K. HANSEN: (Exhibits 6, 7) Chairman Louden and members of the committee, for the record, my name is John K. Hansen, H-a-n-s-e-n. I'm the president of Nebraska Farmers Union and appear before your committee today as our president, but also our paid lobbyist. I do have packets of information for the committee to be distributed, if we could have a page do that, please, and then I also have a second handout which escaped the packets on additional economic benefits that we didn't put in there. But if I might, first, I want to thank the committee for their kind attention and interest and all the good questions. This is a new idea to Nebraska, but it is a proven economic development model in Minnesota. And what we do in public policy a good deal of the time is we look around at folks who are ahead of us, who are making more progress than we are, who are moving forward and doing things that we're not, and we steal ideas and this is an idea that we have looked at in Minnesota. We have investigated it in great depth. We have sponsored many, many tours up to Dan Juhl's wind farm with a lot of different kinds of folks and they all come away, shaking their heads, saying, you know, this is really a good idea; this actually works. And it's a way of not only moving forward with wind energy, but it's also a way of keeping profit centers out in rural communities. And so we have worked with this concept a great deal. This represents years of work on our part. It's a new idea. The size of this industry is enormous, and when you look at the amount of investment that's going on in neighboring states and you look at here is renewable energy dollars that are coming, and in a lot of cases with federal tax dollars coming back into those communities. Nebraska, we are sixth in wind energy capacity; we are eighteenth in development and next year that will be the good old days. Because when you look at the stuff that I've put before you in this packet, we not only have the wind maps, we have...also one of the handouts is the amount of projects in the pipeline in Nebraska. Oh, we don't have any. And so when you look at the amount of projects in the pipeline in all of the other major wind capacity states there's a lot, so we're going to be falling further and further behind. So we're going to go from eighteenth to well down the pack of the major wind states. Also in there is the American Wind Energy information on the wind capacity. The top...their data on the top wind capacity states, we are sixth. It's also where is the wind installed, so it gives you at least a snapshot at a point in time of where our neighbors are at and everyone else and so, as you can see in the AWEA handout, at this particular time, June 30, 2006, Minnesota had 756 megawatts of wind; Iowa, 836; and Nebraska, 73; Kansas, 264; Colorado, 291; Wyoming, 288, etcetera. And so thank goodness for South Dakota. They're the only state that actually has more wind energy capacity than we do and have done less with it. So we've got South Dakota to be better than. But we also have in here a backgrounder piece on C-BED, which is a very good explanation, simple, straightforward. We also have C-BED handouts. We also have the Nebraska Public Power District handout on their project at Ainsworth, which we think is a great project and we compliment them for doing that. But we also have a lot of the traditional benefits, the myths, Farmers Union's renewable energy special order of business at our last convention, places to go to get additional wind information. And then, interestingly enough, two of the things in the back, one is all of the studies that have been done on

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wind energy in Nebraska. And I know that there's some interest in doing additional studies. I tell you what, wind is well-studied in Nebraska, and when you go through this list of studies, we don't build much wind, but we do a lot of studies. And so when you go back, you know, you can see the number of studies that are listed that have been done on wind energy, and at some point you got to stop talking about it and you got to start doing it. And then also in your packet is the National RPS bill that was just introduced on Capitol Hill. That's a lot of information. I also list the benefits of C-BED in my written testimony, which I'm not going to read, but some of the issues, to me, there's two that really stand out that need a little extra attention, and one is that we are sitting on an enormous opportunity here that we're not capitalizing on and we're not moving forward with it. That's just the plain facts. We're just not in the hunt compared to other states, based on the amount of wind that we have. And because of that, and I think there's some reasons for it, and one of them is that public power is at a real operating disadvantage based on the amount of federal incentives that are funded and available to them in order to build wind systems. So when we look at what's available at the federal level, the private sector has a much better and a much better funded, more consistently funded, and a better deal. And so the private sector folks are in the driver's seat. So one of the reasons that we look at C-BED as a way to still protect public power and compliment public power, but to utilize those private sector incentives in the most economically beneficial way by keeping the money in rural communities. The second is that we do have private sector folks in rural Nebraska going around trying to buy up wind development rights, and as an organization that helped build and create the public power system in this state that is one of the longest, most ardent, original supporters of public power, we have letters in our files back and forth to Senator Norris about how we think this might be a good idea, and so we take a lot of pride in our role in helping build the public power system and defend it. But to our mind, when you have outside private sector venture developers coming in and buying up wind rights in Nebraska, that puts, in our view, public power at risk. That is an altogether different kind of private sector development than is community-owned development, and I hope that the committee understands and appreciates the difference between the two, because they are stark in both their economic benefits but also whether or not they're truly working with traditional public power in that kind of way. Our intent is to bring rural economic development to rural Nebraska with renewable energy without paying additional tax dollars to incent them. We're just simply taking advantage of what is already available at the national level with a small amount of local investment, and our goal is to also protect public power. If we thought C-BED was an attack on public power we'd be out beating the snot out of it. Just that simple. So with that, I would close and be glad to answer any questions and offer any of our help as we try to figure out where we might go from here on this bill and/or any other information that we can get you. This is, I know, a fat packet, but it's the skinny packet based on all of the available handouts and the workshops and the things that I do. Thank you. [LB629]

SENATOR LOUDEN: Any questions for John? Senator Dubas. [LB629]

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SENATOR DUBAS: Thank you, Senator Louden. And I ask the committee's forgiveness if these questions have been answered, but I missed a good share of this testimony and there are a couple questions that I do really want to have an answer to. Who, if you could answer this question, who bears the cost of the hookup, transmission lines and other costs to the system with a C-BED project? [LB629]

JOHN K. HANSEN: The C-BED project itself does. That's all built into the...that's all built into the financial pro forma and the, you know, all of those costs are contained, paid for by the project, negotiated back and forth with the utility. And so, for example, if the utility would rather buy the substation and pay for the substation so that they own it, and they operate the substation coming out of a...then you adjust the rates down accordingly. And if it's the C-BED project that's doing it, why, then that's all allocated costs in the...as a part of the contract with the project. [LB629]

SENATOR DUBAS: Thank you very much. And then just help me get this through my brain here, the difference between public and private sector incentives. [LB629]

JOHN K. HANSEN: Well, there are others who will come later who can detail the alphabet soup of clean, renewable energy bonds, REPIs and the other things that are available to public power ownership. Part of the problem is a lot of those have not been as well or consistently funded. There's only a percent that's funded. So while it's there in theory and practice, it's not a funded reality. The production tax credit was scheduled to expire at 1.9 cents per kilowatt for a qualified project, was going to expire 12-31-07. We've been kind of going along in two- and three-year increments at a time. This last one was a two year, and so Congress when they went out the door extended it for one year. There are now discussions in Congress about doing a long-term, a long-term extension of ten years, or even indefinite. But one of the things that needs to happen if America is going to be in the game, and it looks like we want to be in the game of wind energy development, is that we need...Congress needs to send clear, strong signals so that we grow our own manufacturing base. And it's encouraging when you see plants being built in other states, like Iowa, Minnesota, but you need domestic manufacturing capacity because that also drives down our costs. [LB629]

SENATOR DUBAS: Thank you. [LB629]

JOHN K. HANSEN: Yes. [LB629]

SENATOR LOUDEN: Other questions for John? Senator Fischer. [LB629]

SENATOR FISCHER: Thank you, Mr. Hansen, for being here today. I know you and your organization, Farmers Union, have always been very strong and outspoken supporters of Initiative 300. Is that correct? [LB629]

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JOHN K. HANSEN: I think that would be a fair characterization. [LB629]

SENATOR FISCHER: Okay. [LB629]

JOHN K. HANSEN: I don't we'll run from that. [LB629]

SENATOR FISCHER: Just short answers now, just short answers. So can you tell me in this bill is ownership in a C-BED limited to all Nebraska entities, no outside the state entities? [LB629]

JOHN K. HANSEN: Well, the language that we took from Minnesota has Minnesota residents, so we changed it to Nebraska residents. There may be...I'm getting increasingly familiar with commerce clause issues, by the way, and so there may be another way to skin that cat. But what we want to do is to make sure that the bulk of the investment comes from Nebraskans who are also owners of the public power system, and we prefer that ownership structure, so we're trying to figure out a... [LB629]

SENATOR FISCHER: Okay. [LB629]

JOHN K. HANSEN: ...a good way to address commerce clause. If we had a simple answer, I'd tell you. [LB629]

SENATOR FISCHER: Well, as I was reading the bill, page 3, under number (4), the qualified owner in the definitions, it seems that that would be the intent, that the owner...that ownership in a C-BED is limited to Nebraska entities, but I wanted your opinion on that. While you have the bill out, I do have some questions on page 4, number (3), lines 7, 8, and 9, where it says: At the discretion of a C-BED project developer, the C-BED project developer and a public utility may negotiate a power purchase agreement. May negotiate; they do not have to negotiate. Is that correct? [LB629]

JOHN K. HANSEN: Absolutely. [LB629]

SENATOR FISCHER: Okay. Page 5, lines...beginning on line 9, under number (2): Each public utility shall include in its resource plan a description of its efforts to purchase energy from C-BED projects. Why do we go from "may" to "shall"? Why, if they...if they can negotiate, they don't have to negotiate, if public power can negotiate, they may negotiate an agreement, a purchase agreement, why all of a sudden do they have to include a description of their efforts to purchase energy in those projects in their plan? Why the change from page 4 to page 5? [LB629]

JOHN K. HANSEN: My idea of that, and there's...I think that when you're working with

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me you always need to entertain the idea that there's a small chance I could be wrong... [LB629]

SENATOR FISCHER: No. (Laughter) [LB629]

JOHN K. HANSEN: But...it's happened before. I have people who kind of keep track. But my idea of that, and Mark Lindquist really would be...or Dan Juhl, and Dan Juhl really helped, was an architect of the C-BED in Minnesota. This is a question I wish Dan was here to answer. But for me slugging through it the way that I see it is that what we're trying to do is to make C-BED kind of energy available to public utilities so that it's an option so that, you know, our idea, our concept piece over here with me is that we're not trying to ram something down somebody's throat. We're trying to come up with a very economically beneficial, cost-effective way to generate electricity. In fact, we can build it and sell it to them for less than they can do it themselves without incentives. [LB629]

SENATOR FISCHER: I understand that, and I appreciate... [LB629]

JOHN K. HANSEN: So that's... [LB629]

SENATOR FISCHER: And I appreciate the "may" at that point. [LB629]

JOHN K. HANSEN: So that's good, but my idea here is that the "shall" would be that at least they're looking at us as a source of renewable energy. So if they're going to do...they don't have to buy from you, but they at least have to consider it as a part of their planning. Okay, if we're going to need to get renewable energy, let's at least look at the C-BEDs as a way of doing it so we could partner. If you're the municipalities, you could partner. If you're OPPD, you can partner with a project, etcetera. And so that just says that you're going to get looked at. That's not going to say that they're going to have to do it. And we're open to suggestion on that, but that, to my mind, that's...that would be the difference. [LB629]

SENATOR FISCHER: Okay. Thank you very much. [LB629]

SENATOR LOUDEN: Other questions for John? Senator Hudkins. [LB629]

SENATOR HUDKINS: John, let me see if I have this straight. The C-BED is a group of investors that take care of the building of the turbines, and they get their money back because of the tax credit. And at the end of a set number of years they have more than brought in enough money to pay their expenses for building this project? [LB629]

JOHN K. HANSEN: I think you've got it pretty much straight. What you're doing is you're trying to create three different revenue streams with the very unique financing tool here.

And so the local folks are putting up 1 percent of the equity, so you have two different kinds of owners. You've got the owner who owns the project. It's like, you know, I own my house. But who's the equity owner of my house? Well, unfortunately the bank has got a pretty big chunk of that, as well as some of my irrigation well and a few other things. And so there's a difference between actual ownership and equity ownership, and so the owner stays the same. But the local owner puts up 1 percent of the equity and then by partnering with an equity partner for 50 percent of the financing of the project, and a straight lender for the other 50 percent of the project. The equity partner is a company who has, as we say, a large tax appetite, and so they have a need for production tax credits. Your average farmer, you know, we use up whatever credits we would get pretty quickly because we don't make that much money. So John Deere, for example, would be the equity partner. They make a lot of money. So they're paying for the use of those production tax credits, and they're also paying for the use of the depreciation, and the production tax credit of 1.9 cents is almost equal to the amount of depreciation value to them as a private sector. And so you're selling them your depreciation that you can't use, and you're selling them your production tax credits which you can't use. And you're moving more of the money from the 20-year contract from the back end of the project to the front end so you can pay for the entire project in ten years and still get the investor money back and take care of maintenance, operation, everything in the first ten years, and in the second ten years you've got a project that's paid for. And at that point, you're getting also the revenue stream from the sale of the electricity, which you're also using in the front end, but almost all of that goes to debt service, like 95-plus percent of the total cost of one of these projects is up-front capital. So you got to try to drive everything to the front end of the payment period to knock out the debt in the first ten years, but at the end of ten years the local owners, it's called the Minnesota flip, it flips. They're also now the equity owners and so they're getting the revenue stream of the electricity and all the project costs are paid for and they're just doing O&M and they're making money. [LB629]

SENATOR HUDKINS: Okay. Thank you. [LB629]

SENATOR LOUDEN: Any other questions for John? I have one or two, John, since I wasn't here earlier. When you talk about this first ten years and second ten years, now the second ten years is John Deere, as you say, do they...are they still a partner in the operation? [LB629]

JOHN K. HANSEN: In Minnesota there's several different mechanisms, but in some cases the former, you know, 98 or 99 or whatever it was percent equity partner just goes away. In some cases there's a very simple buyout thing of their interest at the end of ten years. And in some cases they hang around a little bit to provide some expertise. [LB629]

SENATOR LOUDEN: Now... [LB629]

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JOHN K. HANSEN: You know, there's a lot of expertise with the equity partners, but for the most part, I would say the lion's share, they are gone at the end of ten years. [LB629]

SENATOR LOUDEN: My question then is, as I see the C-BED, you usually do two, three maybe generators at a time or something like that? I mean, isn't there a maximum how many generators you're going to put in a certain instance? I thought I read this in some of it some place that they would maybe two generators or something is what the project would call for each time. [LB629]

JOHN K. HANSEN: What...there's...in the bill there's some really small projects and that's intended to be more for, you know, municipalities or, you know, somebody partnering with a municipality or some small project, but for a C-BED project, to give you an idea what the minimum size is, and so if you're going to harness the economies of scale so that you could, first of all, buy the turbines at a cost-effective rate; two, build the turbines at a cost-effective rate; and then three, have a large enough number of turbines in one place that you can afford to then have a good service structure at a cost-effective rate to be able to do the servicing and management of that project. Forty megawatts is about the minimum size. And so sometimes they hook 25s together where they're fairly close and so they can do it with similar management, but... [LB629]

SENATOR LOUDEN: Then you're talking about a 25-megawatt wind farm or some...25 tower wind farm or somewhere in that vicinity. [LB629]

JOHN K. HANSEN: The project that we looked at, for example, and were a part of was 20 2-megawatt turbines and they're right at \$3 million bucks apiece installed. So it's a \$60 million project, 40 megawatts of wind, 20 towers. [LB629]

SENATOR LOUDEN: You're going to be able to get enough local farmers to come up with that much money to make a project like that happen, or is this... [LB629]

JOHN K. HANSEN: I... [LB629]

SENATOR LOUDEN: ...going to be somebody like some of your big Omaha investors are going to make this happen? [LB629]

JOHN K. HANSEN: The biggest...one of the most difficult problems we had with this project was telling the long list of folks that we wanted to be 1 percent equity investors, that we were already full up. We've got enough names of enough farmers from across the state that want to be investors that we could...we can do a C-BED project a year for quite a while before we'd run out of folks. That...the amount of interest is just enormous. [LB629]

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SENATOR LOUDEN: And you would be selling them 1 percent interest in the project. Is that what you're telling me? [LB629]

JOHN K. HANSEN: Well, each investor of a turbine, say, for example, puts up about 1 percent of the total cost to be an equity. [LB629]

SENATOR LOUDEN: Okay. [LB629]

JOHN K. HANSEN: And so we had, you know, the State Fair, Husker Harvest Days, all of the booths we've had, you know, we've just had a lot of folks who, you know, gave us their names, their phone numbers and, you know, what do we got to do to get on this list? [LB629]

SENATOR LOUDEN: Get any checks? (Laughter) [LB629]

JOHN K. HANSEN: We got some Czechs. We got some Swedes, some Norwegians, a lot of Germans (laughter), but we had no problem putting together the money. [LB629]

SENATOR LOUDEN: I had an old order buyer tell me, you know, until money changes hands it's just idle conversation. (Laughter) [LB629]

JOHN K. HANSEN: Exactly. Exactly. But we did have... [LB629]

SENATOR LOUDEN: Thank you, John. [LB629]

JOHN K. HANSEN: ...money for this project and we had twice as many investors as we could use, easily. [LB629]

SENATOR LOUDEN: Okay. Thank you. Any other questions? Senator Kopplin. [LB629]

SENATOR KOPPLIN: Yes, thank you. I'm trying to figure out the downside of this because, I mean, that's just the way...I've made some lousy investments in my life and... [LB629]

JOHN K. HANSEN: I hear you. (Laughter) [LB629]

SENATOR KOPPLIN: So... [LB629]

JOHN K. HANSEN: I come from a farming family, yes. [LB629]

SENATOR KOPPLIN: Yeah. If I were going to put money in this, it's going to be ten years and it will be paid off. Now we've heard they last 20 or they last 25, but you could

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lose a whole bunch of them, so at the end of that ten years I got nothing left to make money on. Would that be the risk? [LB629]

JOHN K. HANSEN: Well, part of what you try to do with a project like this is that you try to do, also, a certain amount of sort of self-insuring, but you do a lot of insuring. So, you know, there's things that you could do to cut corners if you were a gambler, but that's why you take the extended warranty on the gear box. That's why you take the extended warranty on the blades. And, you know, everything that you can possibly do to lock down a variable, even though it costs you more money, you do it because if you lose that's a big-time loser. So you're, you know, you're also wanting to make sure that you've got everything that you can possibly get insured will be insured with extended warranty contracts, insurance, performance contracts. There's all those kinds of things. So, you know, to the extent that you can have your variables accounted for and dealt with, they are. And is there some risk? Yes, but all of the risk is by private sector folks. It is not the public sector folks. And with risk I've been told there's supposed to be reward sometimes, and we can be pretty patient in agriculture waiting for that reward, but there is also a reward. And so, yes, this is a very...you know, it's...there's different kinds of risk in this investment, but it's a very good investment. And when people look at it, that's why they want to be investors. And one of the...frankly, you know, one of the difficulties that we have had is that when people look at this and they understand the pro forma and they look at the amount of dollars that can be made in this kind of a project, they just say, well, this is too good. And if you're a farmer you go, you know, I should spend more money, get less return, I should take more risk really to be comfortable. (Laughter) But it's a good business deal and that is also why the private sector investors want to be owners. I mean ownership determines the value at the end of the day on these projects, and so that's why we're also fighting to look at this kind of very...I mean if we were having to put up 80-90 percent or 50 percent of the cost of this project, we couldn't do her. [LB629]

SENATOR KOPPLIN: Okay. Thank you. [LB629]

SENATOR LOUDEN: Okay. Thank you, John. [LB629]

JOHN K. HANSEN: Thank you very much, Mr. Chairman. [LB629]

SENATOR LOUDEN: Senator Hudkins. [LB629]

SENATOR HUDKINS: Okay, John, so you're putting up 1 percent, which would be \$10,000, if my math is right. When do you start making anything back? [LB629]

JOHN K. HANSEN: Right now with new turbine costs it would be closer to about 15,000. [LB629]

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SENATOR HUDKINS: Fifteen thousand, okay. [LB629]

JOHN K. HANSEN: So that would put you right in the ball park right now for 1 percent. And so soon as you're up and running, you're going to be getting a management fee, which then you're going to have to pay for management and a certain amount of the other unaccounted for costs, and so those dollars are going to run in the \$20,000, \$25,000 a year area, but, you know, you got...there's costs in that. I mean that's not all free money. That's...but you're getting your money back depending on what your...how expensive your management, your accounting and the rest of your fix repairs that you can have covered. You should be able to get your money back long before the ten years are over and have a certain amount of revenue there. But after ten years, when the project is paid for, that's when you actually see a very substantial return. [LB629]

SENATOR HUDKINS: Thank you. [LB629]

SENATOR LOUDEN: Seeing no other questions, thank you, John. [LB629]

JOHN K. HANSEN: Thank you, Mr. Chairman, and thank you for the committee's patience and interest. [LB629]

SENATOR LOUDEN: Okay. I have two letters of support to be read into the record from Panhandle Area Development and from a Jim Knopik from Belgrade. (Exhibits 8, 9) Any other...any other proponents? If not, then any opponents? [LB629]

SHELLEY SAHLING-ZART: Good afternoon, Senator Louden, members of the Natural Resources Committee. For the record, my name is Shelley, S-h-e-l-l-e-y, Sahling-Zart, S-a-h-l-i-n-g hyphen Z-a-r-t. I'm vice president and assistant counsel of Lincoln Electric System, the municipal electric utility here in Lincoln, and I'm testifying today on behalf of the Nebraska Power Association which represents all of the electric utilities in the state of Nebraska, the publicly owned electric utilities, including municipalities, public power districts, rural public power districts and cooperatives, and joint action agencies. We're here today to oppose LB629, but not because we're opposed to community-based energy development. We support community-based energy development. But the first question I would pose to you is, is this bill necessary? Mr. Hansen just told you that they were in discussions with Nebraska Public Power District over the past year, trying to develop a C-BED project. They didn't need legislation to enter into those negotiations. I don't know that the legislation is necessary. I don't know what problem was identified that they need any kind of enabling legislation for us. So that's the first question I pose to you. Is there a problem here we really need to fix, or is this something we can already do through voluntary negotiations? With regard to the bill itself, some problems with the bill have been identified and I'm going to walk through a few of those and then talk to you philosophically about some of the thinking behind this bill. The first problem is, as you heard, they took a Minnesota statute where 70 percent of the public...of the power

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there is provided by investor-owned utilities, private utilities. They took that statute and tried to bring it to an all public power state. Doesn't work. The terminology doesn't work. A lot of the provisions they brought over don't work. That's one of the basic problems with this bill, is we try to sort through it and try to figure out what it means and how it works here. It just doesn't. That's our first thing. If we're going to do this, let's sit down and figure out how to structure it properly for a state that's served 100 percent by all public power. The folks in Minnesota, frankly, should be commended. They've done a wonderful job. They've been creative, they've been innovative, they've developed a procedure up there in order to promote greater wind energy development. Good for them. They've got the ability to do that there because they're structured differently. It's a little more difficult to do here. That doesn't make it bad; it just makes it different. So what's our goal here? What are we really trying to do? Are we trying to promote greater renewable energy development, or are we trying to promote greater investment and economic development for our agricultural industry? Two different questions, two different goals. The assumption I think that's been made here is that we're trying to promote greater renewable energy development, so I want to kind of go forward on that basis. The C-BED bill, as written, has a number of problems that concern the Nebraska Power Association, one of which is that it's fairly narrow. It's only wind. The structure of it is fairly narrow. And if you do any research on community wind, as it's been called, there are a whole lot of different structures out there. There are schools that have figured out structures. There's municipalities that have figured out structures. This farmer-based one is one structure. There are a whole lot of different options out there and I question why we would necessarily want to look at just one structure. But again, I don't know that we necessarily need legislation to do some of that. It's also...I mentioned it's also only wind. We're having some methane developments in the state. This shouldn't be that narrow-sighted. It should be expanded and be open to future technologies that come along. Ownership is fairly limited, as we've talked about. There might be opportunities for others in this, but I think we preclude that. There's one interesting thing we talked about. Senator Fischer had asked about, is this Nebraska-only entities? It is on page 3, but when you flip over to page 4, on lines 10 through 12, it says a qualified owner or any combination of qualified owners may develop a community-based energy development project with an equity partner that is not a qualified owner, which to me would mean which is not necessarily a Nebraska-based entity. I'm not sure what that means and what the impact to the project that is, but I think that means that some out-of-state companies could be involved in this. Okay, we have to develop a tariff, but we don't necessarily have to enter into a power purchase agreement. Then what's the point? And we're questioning whether that's really what they mean. In some regards, it seems to me that they would want us to enter into a power purchase agreement, and somehow they want the legislation to put pressure on us to do that, and the question I have, if we don't have to enter into that agreement, I'm trying to figure out how that meshes with our absolute obligation to serve as a public power entity. We don't have a choice who we serve and who we don't, we serve everybody, so I question how that might mesh with that obligation to serve. Then

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there's a lot of provisions about what we should do and how we should consider C-BED projects if we're subject to a renewable portfolio standard, which you're going to hear about in the next bill. Says we must consider C-BED and whether we can help meet our renewable portfolio standard requirements if it can be done at minimal cost to customer rates, and that is on page 5, lines 6 through 8, minimal impact on customer rates. What is minimal? Because I can tell you here in Lincoln, at least, minimal means a whole lot of different things to a whole lot of different people. And we've got a little 91-year-old elderly woman that comes to every rate hearing we have, and I can tell you what minimal means to her. She doesn't want any kind of impact on her rates because she can't afford it. And that's what we're kind of asking you to look at is, you know, you asked about what's the downside? I'm sitting here trying to figure out what's the upside for our customers and what's the risk for our customers? Minnesota, by the way, on their renewable portfolio standard, it's a requirement only on the investor-owned utilities. I do not believe the municipalities are subject to that or the public power entities. I believe it's an objective. They're asked to make a good faith effort to try and invest more in renewable energy. I do not believe it is a mandate on the public power entities there. Transmission--transmission may be nearby. You can build these near transmission. There is still a remaining question whether or not that transmission nearby has adequate capacity to handle the additional load, another question. Is this project subject to net metering? Ironically I found interesting that when you compare it to the Minnesota statute, the Minnesota statute explicitly provides that C-BED projects are not subject to net metering. That was omitted from the Nebraska draft which makes me wonder are they subject to net metering? Mr. Lindquist noted that public power utilities have the same kind of access as IOUs to federal tax incentives and that community wind can counter that. The problem with that is that community wind often relies heavily on renewable portfolio standards. Why? Because it guarantees a revenue source. It guarantees that that C-BED project is going to have an absolute revenue source which, number one, provides assurance to whoever is financing the project, that equity partner that's putting the money behind the project, and so it helps them get financing. But they'd need a guaranteed market. They're not going to build this if they don't think anybody will buy the power. So an RPS assures that we're going to need something out there. So to me the fact that these two bills might piggyback causes greater concern because as you'll hear later, the renewable portfolio standard will have a significant impact on Nebraska ratepayers. And then the problem, of course, as you'll hear later, the problem with the renewable portfolio standard, as you've heard repeatedly today, is public power entities don't get access to those federal production tax credits. We don't have the same kind of tax incentives. There are federal incentives. There's the renewable energy production incentive credit and there's the clean renewable energy bonds program that was just passed a year ago. Both fall way short of what the demand is. The REPI program has been in place for a number of years. Never since its inception has Congress ever fully appropriated that program. There are a lot of public power entities that applied for those credits and don't get them because there isn't enough money to go around. Same with the clean renewable energy bonds. A number of

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utilities applied for millions of dollars' worth of projects under that program and were denied because there's not enough money for it. Why? It's different with the production tax credits on the investor-owned utility side because it's basically tax write-offs. They take those credits on their year-end taxes. So it reduces somewhat the revenues into government coffers, but it's not like they have to go out and find a new money source to fund a program like they do with the public power entities. To do REPI, they have to come up with the funding source. They got to find money to fund that credit program. It's a different kind of problem, makes it a little more difficult to do. Let's talk about the federal production tax credit. In the example that Mr. Dittrich gave you, the financier of the project very likely may be a large out-of-state corporation. Senator Loudon, I think you mentioned John Deere. That's one possibility. They're the ones that are going to receive that production tax credit in that first ten years. That money will leave the state. Nebraska entities aren't getting the advantage of that; that financier will. And that could be tens of millions of dollars leaving the state. All in all, this bill needs some more thought. We need to work at properly structuring something for a public power state and looking at a variety of different ways to do that. NPA is committed to doing that. We're committed to finding ways to increase renewable energy development in this state, but we need to do so in a way that doesn't place undue burden on the rest of our customers. We've discussed other renewable energy issues in this committee. We're recommending that you think seriously about convening a study of all the impacted stakeholders and, yes, I know Mr. Hansen said we've done study after study. I will tell you we've not done a study about community-based wind. That's new. A study could bring all the stakeholders together. We could look at all of the examples that are out there. There are a lot of them. And we could figure out the little nuances and how to structure this properly, again, for an all public power state. We are unique. We're going to have to have a unique structure. They were creative in Minnesota. I believe we can be equally creative here. This is private energy development, by the way. So it does hit the cornerstone of what we are in the Nebraska Power Association so we do sit up and take notice and take that pretty seriously. But I remind you, public power is community ownership. Anything we do is local development in which all Nebraskans reap the benefits, not just a few who can afford to invest in something. We're here for everybody. So the C-BED projects, you've got to remember, those might be lucrative for a few, but it's not like everybody in the state is going to be able to take advantage of that. And that's fine if people can afford to do that. But we also have the obligation to think again about that elderly person on a fixed income or the single mom trying to raise three kids on two jobs and the long list of other customers who struggle from month to month. To the extent that these proposals require us to pay something or to subsidize something or to fund something, the money doesn't come from profits that we make. We're not profit-making entities. It comes from you all and all of the people in the state of Nebraska. It comes out of their pockets because we are public power. We're publicly owned. And the testimony today really reinforces the need to develop a common factual understanding. We can go back and forth on some of the things that have been thrown out today like, you know, how good is wind. Would wind be better than coal? Well, wind

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doesn't blow all the time so we could go back and forth. On one hand they can tell you that wind is cleaner; they can produce perhaps at the same price; it's cleaner. On the other hand, I'm going to come back and say, yeah, but it doesn't blow all the time. We need to balance all of those kinds of things. We had the issues about water today. Frankly, I don't think the water claims were as great as they claimed. Water does go back in. It's used for cooling purposes. Much of it goes back in. As a matter of fact, Gerald Gentleman station consumes approximately one-half of one percent of diverted water. We need a common fact understanding. So all in all, we can develop a working structure if we sit down and work together, which we've not done on this concept. We've talked about a lot of renewable things. We've not done it on this concept. Let's sit back and talk about what's our goal. Let's refocus on what is the goal here. We're trying to promote greater renewable energy development. I know you want us to do more. We'd like to do more. We've talked about incentives this session. We've talked about net metering. We're going to talk about portfolio standards. We're talking about C-BED. There are a lot of ideas flying around out there. Instead of doing this piecemeal, let's sit down and pull the pieces together and come up with a comprehensive plan to promote renewable energy development in the state. Let's focus on that and then let's gather the stakeholders, develop a thoughtful and a responsible plan that provides benefits and opportunities for our rural agricultural-based industries without eroding the base of benefits upon which public power has been founded in this state. It's worth the added time that a study would take to do it right. That's all I have. I'd be happy to answer any questions. [LB629]

SENATOR LOUDEN: Any questions for Shelley? Senator Christensen. [LB629]

SENATOR CHRISTENSEN: Thank you, Chairman Louden. Shelley, thanks for coming. You made the comment about net metering, why it was taken out of this bill. As I see the bill, this is all new generation. There would be no consumption on the other side so why would it even need to be in the bill? [LB629]

SHELLEY SAHLING-ZART: And I don't know. I was mostly curious that that was provided in the Minnesota statute and then taken out here. That was just the one question which makes me question why that happened. [LB629]

SENATOR CHRISTENSEN: Okay. The second one, you said the bill is not needed. Then why aren't we seeing more renewable energy now? [LB629]

SHELLEY SAHLING-ZART: Well, I would tell you it goes back to that all public power state thing. You know, we can structure a model and we probably wouldn't do it like Minnesota. And whatever we structure may not look as profitable as what maybe the Minnesota model does. But I'll give you this premise. I think it's because we're starting with a different base. Folks here are already way ahead because of our rate structure. We are all public power. We have some of the lowest rates in the country, among the

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lowest 10 percent in the country. We start with a lower base. We're already pretty profitable in that regard. So you ask why not more renewable energy development? It has to do with tax incentives. You look at Minnesota. Are they doing a lot in Minnesota? They absolutely are doing a lot in Minnesota. They're doing a lot there. They're doing a lot in Iowa. Why? Because the investor-owned utilities have access to those tax credits. And in their laws in their states, they also get state tax incentives and they're guaranteed rates of return. You come in here and tell us that you'll absolutely...we can't do that because our local boards approve our rates. You know, if we had a way to tell all of our local boards that they're going to have to put those in rate base and everybody is going to have to pay it, that would be one thing. I don't think our customers would like that very well. But the investor-owned utilities who are largely based wherever and don't have that local kind of presence, they don't answer to their people locally. They're headquartered somewhere else. You don't see them. They don't care about that impact. We have to. [LB629]

SENATOR CHRISTENSEN: Okay. One more question. You mentioned that we really don't need this bill and then you also mentioned we could work on this bill. I guess what was you getting at there? [LB629]

SHELLEY SAHLING-ZART: I think we could work at a structure. I think we could work at putting some structures together and putting some ideas and possibly some agreements together. I don't know that we need to legislate it. But clearly I think we need to bring parties together and maybe doing that under the umbrella of this committee is the way to get everybody to the table perhaps. But I don't know that that needs to come out with legislation. It may just be that we do it and we figure out how to structure things and get some agreements in place and address the fundamental issues that are here about what we can and can't do and move forward. [LB629]

SENATOR CHRISTENSEN: Okay, thank you. [LB629]

SENATOR LOUDEN: Other questions? Senator Carlson. [LB629]

SENATOR CARLSON: Senator Louden. Shelley, you're here doing your job. And so far this afternoon we've heard ten proponents and I don't know if there are any other opponents other than you. Although I don't look like it, I'm new (laughter) and trying to figure out some things and the way it works. And I understand, I believe, that this conversation or something similar has taken place several years before. The concept of renewable energy, just the concept, sounds right. [LB629]

SHELLEY SAHLING-ZART: Um-hum. [LB629]

SENATOR CARLSON: You gave, I quit copying down after seven, reasons why it wouldn't work, doesn't work the way it's presented. But if the concept of renewable

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energy is good, what kind of incentive or encouragement does public power need to get serious about coming up with something that is agreeable? [LB629]

SHELLEY SAHLING-ZART: We need a serious tax credit bill to provide financial investment, that's one. And as you heard earlier, I would tell you that probably one of the biggest hurdles to increased wind energy development in particular in this state is lack of transmission where the wind blows. That's huge. And that cost is not insignificant. The load centers are largely on the eastern part of the state and you've got some as you go down I-80. But you go into the north central and Panhandle parts of the state where the highest wind profiles are, there isn't a great deal of transmission up there. So to move that power, you got to have transmission to take it to your load centers and we just don't have it. And that investment is huge. And without, you know, typically a coal plant you can go build a coal plant near your transmission. You can't do that with wind. You've got to take the transmission to where the wind blows. And that investment is just huge. [LB629]

SENATOR CARLSON: Okay, thank you. [LB629]

SENATOR LOUDEN: Senator Wallman. [LB629]

SENATOR WALLMAN: Thank you, Senator Louden. Shelley, appreciate you being here under the hot seat, huh. [LB629]

SHELLEY SAHLING-ZART: Getting used to it. [LB629]

SENATOR WALLMAN: (Laugh) What is the percentage of electricity we buy outstate now? Do we buy a lot or not too much? [LB629]

SHELLEY SAHLING-ZART: Well, I don't know exactly what the exact percentage is, but I could certainly find that out for you. I think it varies. I would tell you right now we're buying a lot of it because we have transmission down in the central part of the state. But... [LB629]

SENATOR WALLMAN: I understand that now, but before. [LB629]

SHELLEY SAHLING-ZART: I don't know what the exact number is, but we can certainly get that and provide it for you. I would tell you that the vast majority is our base load resources typically we make purchases to fill out the, you know, your base load covers the average load you expect to have on a constant basis year-round. And then we have some other intermediate resources that go on top of that. And then we really look at those purchases for kind of leveling out those top end when we, you know, go beyond what our base load resources can provide. It's not significant I wouldn't say. [LB629]

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SENATOR WALLMAN: So are we looking at... [LB629]

SHELLEY SAHLING-ZART: But we also, we also by the same token when we make purchases, we also look for opportunities to make economy sales back. So we try to offset those purchases with sales when we can. [LB629]

SENATOR WALLMAN: Well, I think you're doing a pretty good job, don't get me wrong. But is there a new plant being on the drawing board somewhere? [LB629]

SHELLEY SAHLING-ZART: Well, we have two, three that are under construction now. We have Council Bluffs number four, which is the Mid American Energy Plant in Council Bluffs, Iowa. LES is a participant in that. We will eventually get 100 megawatts out of that plant. Nebraska City, two, an OPPD plant, is under construction, I think scheduled to come online I believe in '09 and somebody will probably correct me if I'm wrong. And another coal-fired plant in Hastings is scheduled to come online 2011. [LB629]

SENATOR WALLMAN: So will that increase the cost? [LB629]

SHELLEY SAHLING-ZART: Those are coal-fired plants. Those are pretty economical plants. They will increase it, you know, somewhat because you have to bring the debt service on for a period of time so there will be some increase, but they're pretty cost-effective resources. The other thing I would tell you is the last plant I saw I don't believe that we've identified as an industry a need to add additional base-load resources until after 2019. [LB629]

SENATOR WALLMAN: Well, I like cheap electricity myself, but I hate to keep mining our coal too. Thank you. [LB629]

SHELLEY SAHLING-ZART: Um-hum. [LB629]

SENATOR LOUDEN: Other questions for Shelley? Seeing none, thank you. [LB629]

SHELLEY SAHLING-ZART: Happy Valentine's Day. [LB629]

SENATOR LOUDEN: Any other opponents? Anyone wishing to testify in neutral capacity? If not, then, Senator Dierks, you wish to close? [LB629]

SENATOR DIERKS: Yes. First of all, I want to thank the committee for their indulgence. You've done a great job of participating and asking questions, and I think that...I'm very impressed. You have good questions and you know what you're talking about. Shelley made some mention about working on a project to come up with some answers for C-BED. And she didn't tell you the whole story. They had a project going and everybody that was in on it thought that it was going to be fine, it was going to work. But all of a

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sudden interest was lost someplace along the line and it didn't mature. My only thing that I'd like to tell you is that I know that this legislation that we have here today, this type of thing is working in other states. If it isn't going to work in Nebraska, I guess I need to ask the question why. I've been one of the most opposed to private sale or to sale of our public power system to private enterprise. And we've had that bill before us a number of times in years past. You remember that, Jody? I've never approved of that. I still think that public power is our best option. I wonder why public power is...why this is not going to work in Nebraska because public power says it's not. I just need to have those kind of answers. Thank you very much. Questions? [LB629]

SENATOR LOUDEN: Questions? I guess not. Thank you, Senator Dierks. [LB629]

SENATOR DIERKS: And again, thank you for your endurance. [LB629]

SENATOR LOUDEN: That will close the hearing on LB629. We'll take a five-minute stretch and we'll start the hearing then on LB412. [LB629]

BREAK

SENATOR LOUDEN: Okay, if you'll be seated, we'll resume the session. We'll resume the hearing now. Senator Christensen, you'll have to get out of the road. I can't see the witness. Okay, please be seated or take your conversations outside. Okay, we will resume the hearing on LB412 and Senator McGill is here to present the opening remarks. Senator McGill, go ahead. [LB412]

SENATOR MCGILL: (Exhibits 10, 11, 12, 13) Senator Louden, thank you and thank you to the Natural Resources Committee for hearing LB412 today. For the record, my name is Amanda McGill, that's M-c-G-i-l-l, and I represent the 26th district. LB412 would establish a renewable energy portfolio standard of 1 percent by the year 2009, increasing by an additional 1 percent each year and capping at 10 percent in 2019 and thereafter. Eligible renewable resources include wind, solar, landfill gas, geothermal energy, fuel cells, and biomass. LB412 also introduces a new addition not seen in previous legislation like this. Energy efficiency measures may contribute to meet the needs of the renewable portfolio standard up to 25 percent of the total standard in any particular year. Retail electric suppliers may purchase credits from other suppliers if they do not get the required number of credits in a given year to fulfill the standard. Failure to get the required number of credits will result in a penalty of three times the value of the credits. Any penalty monies will go to the Permanent School Fund. The bill earmarks the interest from such penalty funds to be used exclusively for the development of renewable energy generation by the school districts. As many of you know, wind is one of our most prevalent renewable energy resources. While ranking sixth in the nation in wind potential, Nebraska now lags behind at 18th in development. A quick visit to the American Wind Energy Association's web site shows that hundreds

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of projects are underway and proposed in states across the nation and in heavy abundance in the Great Plains. But according to that same web site, there are no projects proposed or there is underdevelopment here in Nebraska. One of the primary purposes of a renewable energy portfolio standard is to develop technology and markets for underdeveloped and underutilized renewable energy sources. LB412 will be a catalyst in Nebraska for stimulating not only wind, but many forms of renewable energy development. In 2001, Frank Thompson testified on behalf of NPPD in regards to then LB645, which was a 10 percent renewable energy standard introduced by Senator Preister. Mr. Thompson said that an RPS "arbitrarily sets the amount of renewable energy to be supplied to customers. NPPD believes that customers should provide input on the amount of renewable energy provided. NPPD supports the Wind Energy Task Force recommendation of conducting a deliberative polling process to assess the amount of interest and believes it is more prudent to assess customers' interest and factor those interests into the future energy planning than to select an arbitrary number." Well, the results of that poll that they did conduct are telling. According to NPPD's web site, there was such a poll in 2003, and I provided that to you, to determine customers' knowledge and interest in purchasing energy generated with renewable resources such as wind. Polling results showed that 96 percent of ratepayers favor the development of more wind generation, even with a slight 1 or 2 percent increase in their rates. Many other polls, including the University of Nebraska's rural poll, which I also provided to you, show similar levels of enthusiasm for wind energy. A tremendous opportunity exists for rural economic development, as you have heard during the testimony on the previous bill. Renewable energy will provide economic benefits, energy security, cost stability, requires limited use of one of our state's greatest natural resources, water, and provides numerous environmental and medical benefits to the citizens of Nebraska. As an ever growing interest in renewable energy takes place in Nebraska, I believe an ever growing interest is taking place here in the Legislature. When a vast majority of our citizens call for the expansion of renewable energy, it is our duty to heed that call. I appreciate the work done by NPPD and our public utilities to provide power to its customers at the lowest possible rate. The Ainsworth wind project is a tremendous step in the right direction, but we can go further. I urge you to set the standard and advance LB412 to General File. I'd be happy to answer any questions and I know there's some experts following me as well. [LB412]

SENATOR LOUDEN: Questions for Senator McGill? Senator Fischer. [LB412]

SENATOR FISCHER: Thank you, Senator McGill. Nice to see here at Natural Resources. [LB412]

SENATOR MCGILL: Thank you. [LB412]

SENATOR FISCHER: Do you know what the cost of this would be? I happen to represent the Ainsworth area in my district and we're proud of our turbines, we love our

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wind. But do you know what the cost would be if we're going to have legislation like this that would require the state, in effect, the state, because we do have public power, and our citizens to construct more turbines? [LB412]

SENATOR MCGILL: I don't have that number off the top of my head, but I know there are people coming up that can address that. And I know the number is significant. It is an investment that would have to be made. I completely agree with you. [LB412]

SENATOR FISCHER: And as I said on the last bill, you know, even in Ainsworth we had good economic development during construction. And we have 36 turbines there, there's two in Springview that I represent also. And we have people coming in, we have the construction workers and, yes, that's great economic benefits to that area. But once the turbines are built, because of how they're constructed and the computerized deals on them and the whole business, there isn't any economic development afterwards, in my opinion, because you don't have families moving in, you don't have a lot of jobs. There's one or two individuals that can look after all these turbines. So while I appreciate the interest in economic development, I don't know if that would be a good argument for the bill. [LB412]

SENATOR MCGILL: In that aspect of it. Well, hopefully, too...well, if we're encouraging more use of renewables, then it would be encouraging some of that development in broader areas. Those people may have helped develop in those areas but then go on to work in another part of the state developing their own farms out there. And so while in some aspects some of it is temporary, but hopefully we would still be encouraging that growth in renewable resources in other areas, too. [LB412]

SENATOR FISCHER: And I do support renewable resources. But I'd like sustainable economic development. So thank you. [LB412]

SENATOR LOUDEN: Questions? Senator Christensen. [LB412]

SENATOR CHRISTENSEN: Thank you, Chairman Louden. Thank you, Senator McGill. And if you want to defer this to somebody, too, that's fine. If you go to page 6 on the bill and you go to line 14, it says, "All funds collected under this section shall be remitted to the State Treasurer for credit to the Permanent School Fund." And then you read Section 8, "The annual interest and other income from the funds collected under Section 7 of this act, but not the principal, shall be used solely for expenses related to renewable energy generation in school districts." Okay, my questions are, the principal can be used by school funds' general fund, but the interest and other income can only be used by school districts for renewables? [LB412]

SENATOR MCGILL: Well, the money is to be used for renewables within those school districts. There may be someone who may be able to clarify that a little bit better for you.

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[LB412]

SENATOR CHRISTENSEN: Okay. That's why I say, if you want to defer, I don't have a problem. [LB412]

SENATOR MCGILL: Yeah. [LB412]

SENATOR CHRISTENSEN: I just, I'm not fully understanding both and it's probably just me. All right. [LB412]

SENATOR LOUDEN: Other questions? Senator Hudkins. [LB412]

SENATOR HUDKINS: Senator McGill, we heard a similar bill to this several times. And we have been told that although, yes, renewable energy is very laudable, right now it does cost more to put it into effect. And Nebraska has always prided itself on being able to attract businesses here because of the low electrical rates. How is this bill, which is going to increase rates, how is that going to affect that? [LB412]

SENATOR MCGILL: Well, first, if you're also looking at encouraging renewable developments through some of the other bills looked at today, this would happen naturally if we were encouraging our power districts to be taking on more renewable energies and incenting them to do so. And so this would honestly come naturally, if you're looking at it, if you're doing other things beyond just this to incent the development of renewable energy like this. And I think that at some point, you will also have to look at the long, long-term feasibility of our energy and finding energy in Nebraska. And at some point you have to take a stand and decide that this is a route you're going to take in order to make sure that we have the resources we need in the long term. One of the problems that we have right now with water, for instance, is we weren't thinking long term enough. And now we don't have enough water. And so it's just, at some point in time we have to decide to make that investment, despite some of the pitfalls. [LB412]

SENATOR HUDKINS: Did I just not find it or is there not the ability to count hydroelectric power as a renewable source? [LB412]

SENATOR MCGILL: If it isn't explicitly listed there, then, no, that isn't included in this. [LB412]

SENATOR HUDKINS: And was that your purpose? [LB412]

SENATOR MCGILL: Yes. [LB412]

SENATOR HUDKINS: Why? [LB412]

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SENATOR MCGILL: Well, I can't...in fact, I would actually have to defer that to someone else. But I know it was intentionally left out. There have been many drafts of this bill in the past and I know they've worked on it over and over again and made accommodations where necessary to try to make it more feasible. [LB412]

SENATOR HUDKINS: Thank you. [LB412]

SENATOR LOUDEN: Okay. Other questions for Senator McGill? Seeing none, thank you. [LB412]

SENATOR MCGILL: Thank you. [LB412]

SENATOR LOUDEN: And do you wish to close? [LB412]

SENATOR MCGILL: I will be waiving closing. I need to get back to my other hearing. [LB412]

SENATOR LOUDEN: Okay, thank you. First proponent for LB412? Okay, could I have a show of hands of proponents for LB412? Okay, and how about a show of hands for opponents of LB412? Okay, thank you. Go ahead. [LB412]

MARK LINDQUIST: Mark Lindquist, I am the energy policy specialist with the Minnesota Project. That's spelled L-i-n-d-q-u-i-s-t. I was invited to speak to this bill by the Nebraska Farmers Union, as well as the C-BED bill. You saw my earlier testimony. And basically what I'd like to do is hit a few high points that are specific to renewable portfolio standards, or as we like to call them in Minnesota, renewable electricity standards. I would really encourage you to consider this bill positively and pass it out of committee. One comment was made by the utility representative earlier that it looks like C-BED and the renewable portfolio standard are sort of linked. And that would be and should be true. One creates a market and one opens the market to local and community-owned investment. They work hand in glove together. That's the intent. A number of states have used these kinds of standards mechanisms very successfully to create and build renewable energy industries, particularly wind energy. Minnesota is one. We have, in effect right now, what's called a renewable energy objective. It is a good-faith effort, with the exception of Xcel Energy, that they're required. But the way that is structured is it clearly indicates to all of the utilities, including the public power type utilities, that the expectation that the people of Minnesota have is that they will begin changing their process of procuring resources to meet load and energy demand. And right now, we have a new bill that has passed one chamber of our legislature, passed out of committee in the other chamber of our legislature, that would actually take our 10 percent renewable energy objective and change that to a 25 percent renewable energy standard by 2025; 25 percent by 2020 for Xcel and 30 percent by 2025 for Xcel. And

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that's for all utilities. So we're certainly moving forward further and faster than we were before. We see Iowa has a very small renewable energy standard of 1 percent that's also triggered some very substantial wind development there. California, Texas, Montana, these are all states that have industries based on standards. Colorado, and the Colorado story is interesting to tell. Xcel Energy, which actually serves load in Colorado and Minnesota, spent several million dollars fighting a public ballot initiative there. They lost that. The people of Colorado said we shall have 10 percent renewable energy. And it turned out that all the issues of cost were a little bit different. Once Xcel started putting wind on their Colorado system, they're a very gas-intensive system over there, but they found it was so cost-effective, they said, golly, we're not going to wait for the whole compliance period, we're just going to do this as fast as we can. In Minnesota, we've not found rates have gone up. Rates are stable. The bigger thing that will drive rates up in Minnesota is, in fact, the projected cost of coal-fired power plant construction. We're dealing with a power plant being built on our borders just outside of Minnesota, so it's subject to South Dakota environmental regulation and not Minnesota regulation. It's referred to as the Big Stone II Power Plant and every new piece of information comes out shows how that project is price escalating and then we talk about transmission needs for wind and, oh my goodness, it turns out we can't build a coal-fired power plant without a billion dollars worth of transmission, too. So those things all come together as well. And to tell you a little bit about how Minnesota's renewable standards have evolved, in 1994 we had a big fight over nuclear power. Xcel Energy's nuclear power station needed new storage space for its spent waste because the federal government never lived up to its obligation to remove the waste. And Minnesota statute was such that to get a certificate of need, or public convenience as they're referred to in some places, they had to get that approved by the state legislature. And that became very contentious. And the deal that was ultimately cut to keep the nuclear plant running but to also appease environmental constituencies was that Xcel would be required to build 400 megawatts of wind energy. And if that proved to be cost-effective or least cost resource, they would have to build another 800 megawatts. Well, it turns out it was the least cost. So their mandate went to 800 megawatts. As Xcel was putting wind onto the systems, we were beginning to see that, yes, it's manageable even if it is variable. The system can handle it. Utility systems are very good at managing variability. They do that minute by minute, hour by hour, 365 days a year. They're really good at it, it turns out. And they should be complimented as an industry, by the way. And so by 2001, we were able to pass the renewable energy objective. We now see co-ops and munies putting wind systems, wind and other renewables into the system successfully, cost-effectively. Great River Energy has pointed out that wind has been an important cost saver for their ratepayers. They had some load growth and that affordable energy that's coming from the wind turbines is very important in managing their costs. That's not me saying that, that's the managers of what is actually the second largest utility in the state of Minnesota, the generating and transmission cooperative, Great River Energy. So we see that utilities tend to be very conservative. And this has been successful and the REO has not led to bad things with system reliability cost and so we have been able to

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work through renewable energy advocates, the Minnesota Chamber of Commerce, which also prides itself on Minnesota having a low cost of electricity to help it in competitiveness for business retention and attraction. The Chamber of Commerce signed off on a deal for the new larger RES. We don't see this as a negative to rates. In fact, we do know and we can anticipate that new carbon controls and regulations in one form or another, are very, very likely and wind and other renewables represent actually a hedge, a risk management tool for rates. If we have a coal-based system without that kind of hedge, you're exposing yourself to risk and risk is, as every business knows, a cost, a very real cost. So there's a lot of positives economically. I talked a lot before about sort of the local and the rural development. But from the ratepayer perspective, we have not seen that wind is a driver of cost. Wind has not been a problem. We're far more concerned about the cost of the new coal plants than the cost of new wind and we're moving forward with that. You know, utilities are very conservative. They've always been pounded over the issues of low cost and reliability and they've responded. And no utility executive or manager has ever been punished for being too careful and conservative in making sure the system runs. But that sometimes puts utilities in a box where they're really very concerned about system change and how that might affect things. But what we've seen over and over is, as wind comes into systems and utilities learn how to manage it and work with it, it's very, very successful. One more Minnesota-based thing that I would try to help you with, we've had this debate; can we go from 10 percent to 25 percent, or 10 percent to 20 percent is what we had been talking about the past few years. So last year, we couldn't pass the 20 percent bill but what we did is we had a study. And that study looked at what is the cost and what is the implication of trying to, for liability, for trying to incorporate 20 percent variable wind resource, like wind, into our system. And as that study moved forward, the study committee said, well, let's sort of put some brackets around this and let's look at 15 percent and 25 percent as long as we're doing the work and we're building the models and all this stuff. And what we found is that the Minnesota grid and the Minnesota system, as it's interconnected with the regional system, can handle a 25 percent penetration with a variable wind resource like wind through what has been identified by utilities and advocates alike as a very minor, minor cost for managing that variability. It's not zero but it's darn close. And as I said before, there's a lot of other things that are going on in the electricity industry that will overwhelm any of those cost issues in comparison. So we hear that this might cost more, the people on fixed incomes and the poor people might have to pay more money for their rates, and we really haven't seen that in Minnesota and Colorado, in Iowa, in Montana, in Texas. Wind has been a very successful thing to be integrated into the grid. With that, I'd be happy to take any further questions. [LB412]

SENATOR LOUDEN: Any questions for Mark? Seeing none...oh, Senator Hudkins. [LB412]

SENATOR HUDKINS: Actually, this might be a stupid question. Is nuclear considered

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renewable? [LB412]

MARK LINDQUIST: Not in Minnesota. [LB412]

SENATOR HUDKINS: Nebraska has two nuclear power plants and that's probably one of the reasons why our electricity is so low. Does Minnesota have nuclear? [LB412]

MARK LINDQUIST: Chairman and Senator, yes, we have two nuclear power plants as well, with a total of three reactors for a total capacity of about 1,500 megawatts. We also have several thousand megawatts of baseload coal. [LB412]

SENATOR LOUDEN: Any other questions for Mark? Seeing none, thank you. [LB412]

MARK LINDQUIST: Thank you. It's been a privilege. [LB412]

SENATOR LOUDEN: Any other proponents for LB412? Okay. Are you a proponent, Ken? [LB412]

KENNETH WINSTON: I'm a proponent. [LB412]

SENATOR LOUDEN: Okay. Where were you raising your hand when I was asking? (Laughter) [LB412]

KENNETH WINSTON: I believe I was having a conversation in the hall. [LB412]

SENATOR LOUDEN: Okay, we're going to cut down to five minutes now. [LB412]

KENNETH WINSTON: I can do it in five minutes. [LB412]

SENATOR LOUDEN: Okay, good enough. [LB412]

KENNETH WINSTON: (Exhibit 14) I do have written testimony. Senator Louden, members of the Natural Resources Committee, once again, my name is Kenneth Winston and I'm appearing on behalf of the Nebraska Chapter of the Sierra Club. My last name is spelled W-i-n-s-t-o-n. And my testimony is being handed out. I guess there's a number of things that I wanted to just briefly talk about, is that, well, first of all the reason we support a renewable portfolio standard is that it's been shown to be one of the best tools for increasing renewable energy development. And we're way behind most of our neighbors in this area. For example, Iowa and Minnesota each have about eight times as much...excuse me, about ten times the wind development that we have. Kansas has three times as much and Wyoming has four times as much. We have better wind generation potential than all of those neighbors, except for Kansas. I describe some of the benefits of renewable energy generation. I think we've talked about those.

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Economic development, reducing reliance on foreign oil, increasing costs of nonrenewable fuels, and the fact that the costs of wind and solar remain fairly...well, they don't cost anything. You don't have to continue to buy them. They don't go up and down. And we talk about the environmental impacts, greenhouse gas emissions, pollutants such as mercury, and then the water usage. Then I wanted to focus on a couple of points here. One of the things that's often said is that if we go to more renewable energy, it will increase our electric bills. And so I did a little bit of research to figure out where we are in terms of our electric bills. And according to the Nebraska Department of Energy, we're tenth in the nation. And that's good, that's a good thing. And I think that's important. But we don't have the lowest rates in the country and we don't have the lowest rates in comparison to a number of states that have a lot more wind development than we do. For example, Wyoming has more. Of course, they have lots of coal. Washington, which probably has hydroelectric, they also have quite a bit more wind development than we do. Oregon also has hydro development and but they also have four times as much wind development as we do. In North Dakota, which also has coal, but has more wind development than we do. So I guess the argument that if we develop lots of wind that's going to hurt our rates, I don't think that that necessarily follows. Then I guess I just wanted to talk a little bit about public power and the fact that the Sierra Club is a supporter of public power. One of the things that we're concerned about is the fact that there have been surveys that have consistently indicated that huge majorities of the public and the people surveyed support the development of more renewable energy. And if we're going to have public power in the state, that public power should reflect the will of the people that are paying the bills. And I understand the idea of not wanting mandates. But my concern and the concern of the Sierra Club is that if the public utilities remain out of sync with the will of the people, that the people may rise up against them and provide an inroad for those who oppose public power to take advantage of this unrest and this could cause the downfall of public power. I certainly don't want that to happen. Now I guess I wanted to talk just a little bit about why we don't have more renewable energy in the state. Well, it's pretty simple. The reason we don't have more renewable energy is because of the fact that the utilities have consistently opposed it. And I understand the idea that, I don't like mandates and certainly, whenever there's an incentive bill, the Sierra Club has been across the hall in front of the Revenue Committee every time there's been an incentive bill introduced for renewable energy and we'll continue to do that. But sometimes mandates are for the good of the people who are being mandated. And I thought about using some analogies with my children but I don't think that would be appropriate because I don't think that would be an appropriate analogy in this particular situation. So what I thought I'd use instead was an analogy with regard to the auto industry. For years and years, the auto industry opposed higher fuel standards, the United States auto industry. They said, can't do it, don't want to do it, it will hurt us. Well, now after years and years of being clobbered by the imports who made more fuel-efficient vehicles, where are they? They're in bad shape. I think the time has come for the Legislature to say we have to have more renewable energy and we're going to tell you that you have to provide more

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renewable energy and it's for your own good. Because if you don't do it, it's going to hurt you. And I'm sincere about this. I know I sometimes am lighthearted here in front of the committee, but I'm sincere about this and the Sierra Club strongly supports this bill and we'd ask for its advancement out of committee. Thank you. [LB412]

SENATOR LOUDEN: Okay, questions for Ken? Senator Fischer. [LB412]

SENATOR FISCHER: Thank you, Senator Louden. Thank you, Mr. Winston, again for being here. [LB412]

KENNETH WINSTON: Sure. [LB412]

SENATOR FISCHER: In reading the letter that you submitted and you list seven benefits of renewable energy generation, and I agree with those, the majority of those. I do question when you say that the cost of wind and solar will remain constant because I don't believe it will. And maybe we can have this discussion and not take up a lot of committee time. But you said it doesn't cost anything. But you have the initial cost when you're building these turbines. You know, as I said, Ainsworth is in my district. I was out there when they were constructing it for two tours. You know, I've been out there a couple of times since. Turbines haven't been up that long. And I keep asking, what's the life expectancy of a turbine? And from what I recall from visiting in my area is 13 to 17 years, not 20 to 25. There are costs in these, there are costs in maintaining them. So I would question when you said the cost of wind and solar will remain constant and you said they don't cost anything. [LB412]

KENNETH WINSTON: Well, in terms of building something, obviously that's going to cost something. [LB412]

SENATOR FISCHER: And maintaining. [LB412]

KENNETH WINSTON: And maintaining something, that certainly costs something. But when I said, I guess the term that I'm intending to indicate is that you don't have to buy the wind, you don't have to buy the sunshine, whereas you do have to buy the coal and you do have to build the plant in the first place. And the price of coal is going up and the price of natural gas has gone up markedly. And so now the people from NPPD are telling me that the cost of wind, which three or four years ago was more expensive than just about everything just because of the cost of construction, the cost is now comparable to nuclear. And of course, I don't know what all the factors are that they're putting in. But if they're telling me that, then I'm assuming that a lot of other costs have gone up and the costs of wind generation have gone down. So I think that it's...well, I guess I feel fairly confident in making that statement. [LB412]

SENATOR FISCHER: We're ranchers. We like to say, you know, we harvest the sun.

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[LB412]

KENNETH WINSTON: Sure. [LB412]

SENATOR FISCHER: We grow grass and we market the grass then through our cattle. And even though the sun doesn't cost anything, we're still not making money. (Laughter) [LB412]

KENNETH WINSTON: Well, we'd like to provide you some opportunities to make some more money, Senator Fischer. [LB412]

SENATOR FISCHER: I appreciate that. Now a serious question again. When you talk about the survey, you know, the different surveys, I look at survey results, too. But I always question who's doing the survey. And I have no doubt, no doubt that 90 percent of whoever did this survey, that 90 percent of the people responding said they wanted more renewable energy. I mean, that sounds great. It sounds great, how can you not be for it? Do you think 90 percent of the people who responded to that survey knows what 200 megawatts of wind power can do? I don't. That's scary, because I'm on this committee. But really, do 90 percent of the people even know that? [LB412]

KENNETH WINSTON: Well, the...well, I won't say that 90 percent of the public understands that. [LB412]

SENATOR FISCHER: But they're responding to the survey that you're quoting. [LB412]

KENNETH WINSTON: Right. The survey that I'm quoting is an NPPD survey and it was done as a deliberative poll where they spent time educating people about what they were talking about so that the people would understand what 200 megawatts meant. And so probably the respondents to that survey were more well-educated about this issue than me, for example. So I mean, yeah, so I believe that the respondents to that particular survey understood it. But there also have been some general public surveys that have indicated pretty strong support for renewable energy as well. And you know, I guess...we're operating in a political environment and we want to support our public institutions. And I guess if there's strong support for something, we ought to help them do the right thing. [LB412]

SENATOR FISCHER: But I think we need to be educated ourselves and also educate the public on the full ramifications of something, too. [LB412]

KENNETH WINSTON: And I fully agree. And I would be glad to, and the Sierra Club would be glad to be part of that educational process. [LB412]

SENATOR FISCHER: Appreciate it. We'll have to get together and visit. Thank you.

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[LB412]

KENNETH WINSTON: Sounds good, thank you. [LB412]

SENATOR LOUDEN: Other questions for Ken? Senator Wallman. [LB412]

SENATOR WALLMAN: Thank you, Senator Louden. Say, Ken, didn't LES charge an extra cent? [LB412]

KENNETH WINSTON: They did. I believe it was three cents, I'm not... [LB412]

SENATOR WALLMAN: Is it three cents? [LB412]

KENNETH WINSTON: And I think it's still ongoing and I don't know whether it's all paid off. [LB412]

SENATOR WALLMAN: Would Shelley know? [LB412]

SENATOR LOUDEN: We'll have to wait until Shelley gets up here. [LB412]

SENATOR WALLMAN: I'm sorry, I'm sorry. [LB412]

KENNETH WINSTON: But anyway, I believe it's three cents and I think it's still ongoing. [LB412]

SENATOR WALLMAN: Okay. [LB412]

SENATOR LOUDEN: Other questions for Ken? If not, thank you, Ken. [LB412]

KENNETH WINSTON: Thank you. [LB412]

SENATOR LOUDEN: You're a proponent, John? I could have never guessed. (Laughter) Go ahead. [LB412]

JOHN HANSEN: Mr. Chairman, members of the committee, for the record, my name is John K. Hansen, H-a-n-s-e-n, and I appear before you today as president of the Nebraska Farmers Union and also our paid lobbyist. I think a lot of this issue gets down to the business whether you're sitting on the horse looking backwards or sitting on the horse and looking forwards. But if you're sitting on the horse looking backwards, backing into the future, you're going to continue to just keep doing what you've always done which is going to continue to get you what you've always got, which isn't going to be any more renewable energy. But if you're going to look at new generation costs and compare them apples to apples, oranges to oranges, and if you look at the trend lines of

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all the costs of the variable sources of generation, renewable energy is a good investment because it is a hedge against the higher carbon-based costs that are coming. Ain't no doubt about it, they're coming. And they're going to come and they're going to get more stringent, not less. And so one of the experiences we have had as a part of our carbon sequestration program is, I actually check the Chicago Climate Exchange now, not just for the price of the Chicago board just for the price of corn and soybeans and wheat and cattle, I also check it for the price of carbon. And I got to tell you that in Europe the price of carbon is about four times what it is here because they're that far ahead of us with cap and trade type regulatory efforts. So when cap and trade comes, and it's going to come, there's going to be substantially higher carbon-based costs. So as we look at wind over a 20-year period, it is going to be very, very cost-effective, not only today, apples to apples, but every year out it's going to get more cost-effective. One person's mandate is another person's standard. And my view of this is, and I started out very early on in this process 17 years ago supporting something very similar to this. And we did head knocking a long time with public power, which those folks are like family to us. And so we finally said to public power, and we were really pleased that they said, well, I'll tell you what, we'll just go ahead and adopt our own voluntary RPS and we'll just do it on a voluntary basis and we'll move forward. And you know, it's like, hooray, great. You know, that takes the need for any other kind of legislative guidance away. That's the way it ought to be. If I thought they were actually moving forward at the rate that they need to move forward, then I wouldn't be supporting this bill. But this bill represents 17 years of mañana, tomorrow, can't get there from here, we're going to get right on that, we'll do it tomorrow, promises. And at some point, our public power system in the state of Nebraska ought to be at least as responsive to our owners as our private sector generation-based states are to their customers. And other states are moving forward with RPS and when they move forward with RPS, they move forward with renewable energy. It's just that simple. Kansas, just several weeks ago, the governor jawboned the private sector utilities in Kansas and they're going to do 10 percent RPS by 2010 and a 20 percent RPS by 2020. And so if our public power generation was moving forward with renewable energy, we would not support this bill. But in my view, it's kind of like salting the hay and heading them toward water. And with that, I'd be glad to answer any questions. [LB412]

SENATOR LOUDEN: Any questions for...Senator Carlson. [LB412]

SENATOR CARLSON: Senator Louden. John, I find it difficult to sit here and criticize public power, having come from an area that...6:00 on Saturday night, my wife went in the dark and we went in the dark for two days before we could get out of prison. And by the end of the second day, our kitchen was colder than our refrigerator, and watched public power jump in and rescue us. And those linemen in Holdrege were treated as military because everybody appreciated so much as to what they were doing. Now having said that, I understand some dragging of the feet here. Why does public power drag their feet? [LB412]

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JOHN HANSEN: With all due respect, that's really a question that they should answer. You know, when we look at the cost and we look at other things, you know, the additional costs, the project that we were in negotiations with...so I've been in power purchase agreement negotiations for some time. And without revealing all of the particulars, which I think would be inappropriate, but I would just tell you that we could, through C-BED structures, sell them, renewable energy, for less cost than it would cost them to build it themselves and pay for it without incentives. And it was very cost-competitive with what they had done with their own projects before. And so from a cost standpoint, I don't see a big difference in cost. And you know, so I don't know what the problem is. I honestly don't know. To me, it just seems that there's reluctance there, for whatever reason. I wish it wasn't there. I don't have...I'm not in a position to answer that question. But I am an owner of public power and I'm a defender of public power. And just like with government, we're all stakeholders here. And I view this as a stakeholders meeting. [LB412]

SENATOR LOUDEN: Okay. Senator Dubas. [LB412]

SENATOR DUBAS: Thank you, Senator Louden. John, I know there was a lot of talk like in the President's address about renewable energy. And I know I've heard talk about a national RPS; we're talking about a state. Why wouldn't we just wait for the national? [LB412]

JOHN HANSEN: Well, I think that's certainly an option. And I think a national standard would be good. And I would hope that this time, if in fact...and there is, in your packet that I handed out, there is an effort afoot to create a national standard. That was one of the handouts that I put in your packet. And I would hope that this time, that the public power in Nebraska wouldn't ask to be exempted out of those national standards. You know, at some point you got to be...if public power is as good as private sector generation, and I honestly, in my heart, believe that it is. In fact, I believe it's better. But I believe that we have the capacity and the ability to be at least as responsive to our owners as do private sector-based states. And if the private sector folks can figure out how to make renewable energy work, public power can figure it out. [LB412]

SENATOR DUBAS: Well, what do you mean by they're asking to be exempted out? [LB412]

JOHN HANSEN: My understanding is that public power in Nebraska asked, the last time we ran an RPS bill at the national level, to be exempted from compliance in Nebraska. [LB412]

SENATOR DUBAS: Thank you. [LB412]

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SENATOR LOUDEN: Other questions for John? Senator Fischer. [LB412]

SENATOR FISCHER: Thank you, Mr. Hansen, for being here. Do you know how much it costs to put up a wind turbine similar to the ones that are at Ainsworth? [LB412]

JOHN HANSEN: Yep. [LB412]

SENATOR FISCHER: What does it cost? Short answers, now. It's getting late. [LB412]

JOHN HANSEN: For a two megawatt turbine right now, based on what we think we could do, we're in the ballpark--installed, up, running, all of the allocated costs, substation, all of that--about \$3 million for a two megawatt turbine. So in our case, a 40 megawatt project was \$60 million. [LB412]

SENATOR FISCHER: Okay. Do you know the cost for transmission lines to carry... [LB412]

JOHN HANSEN: Those were on existing transmission lines that were just tying in. [LB412]

SENATOR FISCHER: Okay. But what if there aren't existing transmission lines? Do you know the cost? I believe it goes per foot, at least when we've put electricity in at the ranch it's per foot. Do you know how much that is? [LB412]

JOHN HANSEN: I have, too, yes. Well, copper is up some, I've heard, as I just priced my irrigation well. Yeah, but that's part of why it is that...what we envision is the opportunity to work with public power, to put facilities where there is both wind and wire and need. And that's a part of the equation. So if you're going to have to pay for a lot of transmission, costs go strange. But 40 megawatts is about 1 percent, if you're looking at, I think, of NPPD's... [LB412]

SENATOR FISCHER: And what...I don't mean to be rude in interrupting you, but I'm just trying to move it along. [LB412]

JOHN HANSEN: Yep. [LB412]

SENATOR FISCHER: The bill is asking for 10 percent by a certain date, is that correct? [LB412]

JOHN HANSEN: 2019. [LB412]

SENATOR FISCHER: And you just said, what, 40... [LB412]

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JOHN HANSEN: Forty megawatts, if I remember right... [LB412]

SENATOR FISCHER: Is one percent. [LB412]

JOHN HANSEN: ...is about 1 percent of NPPD's native-based load, if I remember right. But like I've said before, I could be wrong. [LB412]

SENATOR FISCHER: Okay. [LB412]

JOHN HANSEN: But that's as I remember my... [LB412]

SENATOR FISCHER: Okay, thank you. [LB412]

SENATOR LOUDEN: Other questions for John? Seeing none, thank you, John. [LB412]

JOHN HANSEN: Thank you, and thank the committee for their patience today and interest. [LB412]

SENATOR LOUDEN: Other proponents? [LB412]

ROBERT BYRNES: Good afternoon, Chairman Louden and committee. My name is Robert Byrnes, spelled B-y-r-n-e-s, and I am here to testify in favor of LB412. And I will keep my comments brief. Nebraska sorely needs to set a goal that will enable us to establish a time line to help us achieve a more significant renewable energy component in our electrical mix. For example, on the electrical grid we're currently below 1 percent. The nation as a whole is adopting a goal-setting strategy in this regard. Many leaders in our state and our state government have endorsed a 25 by 25 renewable energy goal. And this is also the project national goal level. If we are...we have before us this LB412 that proposes 10 percent by 2019. If we undertook this, this mandate, we would still fall far short of the national goal and that goal has been endorsed by many within our government, from state government, from the Governor on down, to 25 percent by 2025. In fact, by the year 2019. Even if we would have to increase renewable energy development by 300 percent to meet the national goals. In short, I think the RPS, while still badly needed, is modest in the goals that it sets. Ten percent in 2019 is a similar goal we see in Rhode Island and Connecticut, in states that have far less resource and capacity to do these things. In addition to setting real goals, the RPS, I know, the RPS will also make a very loud statement about where we stand as a state regarding renewable energy. Are we serious about this or is it just a topic that we like to talk about, something that makes catchy sound bites and interesting conversation. I think an RPS clearly differentiates where we stand if we're going to set a goal and a definite deadline to have things done. The RPS would make it clear that we're serious about this. And again, I believe this is a very modest goal that this legislation includes. I strongly encourage the adoption of the RPS standards. It will clearly show our

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commitment to growing renewable energy in our state and demonstrate that we have heard the voices of an overwhelming majority of citizens who have clearly called for increased development of renewable energy. And this is in the NPPD study, the CARI study, and over again. And I have many opportunities to talk with fellow citizens, you know, on these issues on a day-to-day basis and I know this is very much in their minds. The needs for the RPS are many. I think the very bitter struggle against net metering shows, you know, net metering is a very small, it's a 1 to 2 percent type of program. And the very emotional, bitter struggle that assumed or took place over net metering I think is clear testimony to the fact that a mandate is needed at this point. It's just, it would create the need for these kinds of things to happen. And I think that the struggle that's going on with something so miniscule, like net metering, is testimony to that. Someone asked about the cost of an RPS. I would respond with, what is the cost of not doing an RPS? We know these current energy costs are going to increase. We know that transportation costs, carbon taxes, all kinds of things are going to drastically affect the baseload model that we have right now. And we have the opportunity to get ahead of the ball and to make that transition now, at least to the small extent, the modest extent that this legislation allows. I think one of the reasons why...and again, public power has done and will continue to do great things for the state of Nebraska. But I think in development of the renewable energy potential here in the state requires an out-of-the-box kind of approach. And I (laugh) remember making this argument on net metering. It's centralized versus decentralized. When you look at decentralized production of power, it's very much different from what the utility has become extremely skilled and adept at; centralized power to keep costs down, maximize economies of scale. That's what they're trained at, that's what they are experts at doing. Renewable energy is not centralized power. Renewable energy is distributed power, make it where you need it. My farm has run off grid for three years. I make it, not only where I need it, but when I need it. And you know, these kinds of philosophies and principles are not commonly utilized within the utility and they haven't been needed. It is easy to maintain the status quo, that is for sure. But we will need to work for change. It's just on a state level and on a national level. A hundred years of petroleum addiction is not going to go away overnight. The RPS does require change but does not tell us how we do that. And I think that leaves us a great degree of flexibility in how to achieve those goals; through net metering, through methane generation, through hydrogen storage of wind power, through wind power. There's a lot, gasification technologies of biomass. There's a lot of ways we can skin that cat. But I think a 10 percent mandate is needed and I would strongly the committee to consider advancing it to General File. [LB412]

SENATOR LOUDEN: Questions for Robert? Senator Fischer. [LB412]

SENATOR FISCHER: Thank you, Mr. Byrnes, for being here. I appreciate the information that you sent out, too. In the bill, hopefully short answer, on page 2--I don't know if you have a copy--under biomass, it includes crops and organic waste but it excludes other things, like tires and treated wood and demolition debris and things like

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that. Do you have any idea why that's in the bill? [LB412]

ROBERT BYRNES: Yes, ma'am. Biomass is defined as that end product of recent biological activity. Tires are old carbon. Biomass is defined as new carbon and these are terms that we'll be talking about tomorrow in Lincoln at the USDA conference. But new carbon, old carbon are very different. Biomass is not old carbon. [LB412]

SENATOR FISCHER: But can you make energy out of tires? [LB412]

ROBERT BYRNES: Yes, you can. But it's not renewable energy. [LB412]

SENATOR FISCHER: Well, why wouldn't you want that included? I mean, look at what we do with old tires. [LB412]

ROBERT BYRNES: From a waste utilization standpoint, it would have a value. That you cannot disregard. If you can take a waste, in any scenario, if you can take a waste stream, properly utilize it, and turning it into something productive, that's a plus. There is a lot of, when you're talking about burning, just like when you're burning coal, the emissions control technologies, because you're burning something that's pretty complex chemically and the combustion by-products are going to be complex and a lot of times poisonous. So the burden falls on the emission control technology. With biomass consumption, you don't have those. Those are generally very simple organic compounds and break down CO₂ and H₂O so you don't have the toxics, biodiesel being a perfect example. You don't have any toxic profile in the emissions. Compare that to diesel fuel. So I can see why in a renewable energy standard to have a nonrenewable energy, old carbon feedstock, doesn't quite seem to fit. But I think there would be room to incent any kind of waste to productive energy stream. [LB412]

SENATOR FISCHER: Okay, thank you. [LB412]

SENATOR LOUDEN: Other questions for Robert? Seeing none, thank you. [LB412]

ROBERT BYRNES: Thank you very much for your time. [LB412]

SENATOR LOUDEN: (Exhibits 15, 16, and 17) Okay, any more proponents? Okay, we have a letter to read in from Center of Rural Affairs in support of LB412 and one from the Panhandle Area Development by Jerrod Haberman in support of LB412. And the Midwest Energy, located in Chicago, signed by a Michael Donahue, Midwest Energy Partnership in support of LB412. With that then, I guess we will take opponents to LB412. [LB412]

GARY STAUFFER: Judging from the time, it's now good evening, Mr. Chairman and committee members. [LB412]

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SENATOR LOUDEN: Go ahead, we won't talk about that. [LB412]

GARY STAUFFER: (Exhibit 18) My name is Gary Stauffer, it's S-t-a-u-f-f-e-r, Gary, G-a-r-y. I'm the executive director, CEO of NMPP Energy, located here in Lincoln. I'm also the vice chairman of the Nebraska Power Association and I'm speaking on their behalf this evening. I will be brief, but I would like to share with you two personal observations since I've been here since 1:30. [LB412]

SENATOR FISCHER: So have we. [LB412]

SENATOR HUDKINS: So have we. (Laughter) [LB412]

GARY STAUFFER: As you have. The first observation is that your valentine and my valentine expect us to be home sometime tonight. The second observation I would like to share with you is that I'm in the seventh inning of my energy career. At my seven innings at bat, I've worked for investor-owned utilities in the United States, investor-owned utilities in North America, particularly in Canada. I've worked for state-owned power utilities, most recently in Africa. I'm new to Nebraska. And earlier, the senator commented he was new to this committee. This is the first time that I will address the committee. But an observation I would make, if you are a consumer of electric energy in the state of Nebraska, the model doesn't get any better. And I've seen a lot of models. If you are an energy investor, the model doesn't get any worse. You've got it right in Nebraska. I think it's worth fighting for. With that, I'll start my prepared comments. The Nebraska Power Association is a voluntary organization representing all segments of the power industry; municipalities, public power districts, public power and irrigation districts, cooperatives engaged in generation transmission and distribution of electric energy in the state. There are 169 public power entities in this state who are members of NPA. As you are also aware, it is the policy of the state of Nebraska to provide its citizens with adequate, reliable, low-cost electric service consistent with sound business practices. The agencies responsible for providing electric service to citizens of the state work through the NPA in implementing that policy. NPA opposes mandates. Nebraska is the only all public power state in the nation. Legislation that mandates items, such as LB412, reduce local control and customer input to utility decision making, which is the defining strength of Nebraska's public power system. Mandates are the legislative stick in the carrot-and-stick equation. NPA supports carrots, not sticks. LB412 creates a mandatory market for a set of narrowly defined renewable resources without regard to the reliability, total life cycle cost, or even the actual need for additional generation assets. LB412 is a hidden tax on all Nebraska electric customers to support a specific set of renewable energy resources. To meet the requirements of the bill, more than 650 wind turbines and three high-voltage transmission lines would have to be built across the state at a cost of over \$2.5 billion. Now to put that in context, that's the equivalent of the entire annual budget for the state

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of Nebraska. Additionally, although the annual renewable penetration targets in the bill at 1 percent appear modest, they actually represent 50 percent of the electric demand growth estimated during the bill's target achievement period. Clearly, conservation and energy efficiency incentives should be seriously considered before enacting a market distorting tax on every electric consumer in the state. Nebraska's power supply system cannot be directly compared to any of our neighboring states. Incentives for private investment returns or tax reduction programs for investor-owned companies don't fit Nebraska's model of public ownership for low-cost and direct end-user benefit. I've just explained to you why we oppose LB412. What does NPA support? We support clean air. We support a balanced multipollutant control legislation which achieves real environmental results in an efficient and cost-effective manner and allows for the continued supply of reliable, reasonably priced power. NPA supports economic growth and development in Nebraska. Nebraska's low electric rates represents a major, underline that, a major competitive advantage and an economic incentive for employment in Nebraska. NPA also supports continued research into the science of global warming and development of cost-effective technologies to reduce or mitigate greenhouse gas emissions from the electric power industry. In closing, NPA opposes adoption of LB412 because it mandates specific generation portfolio standards as a way to financially promote a set of narrowly defined renewable energy resources. This mandate violates a bedrock principal of local control, which has guided public power in Nebraska for over 100 years. LB412 would be a tax on every electric consumer in Nebraska, which otherwise takes pride in low-cost electric power as the fuel in the engine of economic growth. I have included in your packet of the information that has been passed out a proposed resolution that you might consider supporting. This resolution sends a strong message to the federal government from the state of Nebraska to fully fund renewable energy production incentive programs that are known as REPI, and to remove the volume caps for funding the clean and renewable energy bond program. Thank you for your time. I'd be happy to answer any questions. [LB412]

SENATOR LOUDEN: Any questions for Gary? Senator Carlson. [LB412]

SENATOR CARLSON: Senator Louden. Mr. Stauffer, when John Hansen was in that spot and I asked him a question, I couldn't help but see you. I said, why are public power companies dragging their feet. And in his answer, you shook your head. I'd ask why. And then in cost of construction, you indicate 650 turbines at \$2.5 billion, and I think that calculates out about \$3.8 million each. And you shook your head when he talked about cost. So where was John wrong? [LB412]

GARY STAUFFER: Well, Senator Louden, Senator Carlson, thank you for picking up on the body language. The public power industry in Nebraska has not been dragging its feet on renewable energy. In fact, in our family at NMPP Energy, we developed the Kimball wind farm, ten megawatts of wind adjacent to Kimball, in the early 2000s. And we developed that as part of what we thought was a low-cost alternative that was

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available in our portfolio at the time using member generation and support of the wind resource that was available. And we did that on our own through member initiative. We also are a participant, a partner in Ainsworth's project, which NPPD did. Those two projects in comparison to neighboring states, where investor-owned utilities...and having had a five-car garage from an investor-owned myself, I can tell you that the incentive on the investor side is very strong. And that is, for every dollar that they get in a tax reduction strategy is a direct reduction in their tax expense, which therefore, dollar for dollar, is an increase in the shareholder equity. That's an unbeatable formula. If I put my investor-owned hat back on, I'd say I'd be planting wind farms all over any place. We don't have that drive in Nebraska. Now in terms of dragging out feet, we would like to build more wind. You heard Shelley say earlier. Unfortunately, the wind isn't where the load is, nor is the wind where the transmission is. And now there's another thing about wind. Everybody said wind is free. Absolutely correct. The problem is, wind is not predictable, nor is the intensity of wind power predictable. The very lights in this chamber had to be predicted one day ago in LES. And every six minutes today, LES has to correct if their prediction is incorrect. Unfortunately, we can't predict the wind very well. So in order to build a robust portion of our fleet, we have to back it up with base load or mid-level generation. So believe me, Senator, I'm a practical electric practitioner. If I could take advantage of a free fuel, we'd be all over it. And unfortunately, we haven't figured out all of the technologies in a cost-effective way to make wind a robust part of our portfolio. We will continue to strive to do that and there are, you know, obviously there are things that we can do in this state. But having, and I'm going to be brief, back to the valentine. The other thing that I think Nebraska needs to be proud of is that if you take a look...and I'm on the APPA board of directors, the American Public Power board of directors on a climate change task force. And one of the things that's unique about Nebraska is if you take its entire generation portfolio--hydro, nuclear, coal, mid-level gas, wind--the results are, we have about 35 percent of our generation portfolio is carbon neutral. That's nuclear, wind, and hydro. We are substantially ahead of any of our neighbors in terms of our impact on the environment and our carbon neutrality. So we have got a lot to be proud of there. Short answer is we'd like to do more, tough to do it, and we have no direct incentive that we can transfer to the end-use customer who really is the person that has to pay for this. I listened to three and a half hours of discussion, all about what a great investment it is, but there was not one word until Shelley sat down and said, somebody has got to pay for that. That's you and me. It's a great investment because it's going out of our pocket into theirs. [LB412]

SENATOR LOUDEN: Senator Dubas. [LB412]

SENATOR DUBAS: Thank you, Senator Louden. Thank you, Mr. Stauffer, for being here. We definitely know that there's a difference between public and private. And we're the beneficiaries of the public power. Could you explain to me why there might be a difference between private power being able to meet RPS versus public power being able to meet RPS? [LB412]

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GARY STAUFFER: Yes. Senator Louden, Senator Dubas, it all has to do with tax credits. An investor-owned utility generally pays in the 50 percent range in terms of their income tax. And so their strategy is to reduce their income tax exposure at any given time. Because as I said earlier, it's a one-to-one relationship. For every dollar they don't pay into the federal government goes into shareholder equity and dividends. So they are directly driven to produce those kinds of results. Well, fortunately public power in the state of Nebraska does not pay federal income tax. So we are not incentivized the same way. Unfortunately, we have not also been beneficiaries of the financial funding that could be available by the federal government for clean renewable energy bonding that would give us financial incentives to build, help offset the capital cost of wind. That's not been funded. That's why the resolution is in your packet to say if Nebraska wants to maintain its leadership in this area, it needs support from the federal government. Have I answered your question? [LB412]

SENATOR DUBAS: Thank you. [LB412]

SENATOR LOUDEN: Senator Wallman. [LB412]

SENATOR WALLMAN: Thank you. You know, what scares me most about all this, I've been approached by private utilities. I've got land along a transmission line. And they're going to put the heat on us, as a Legislature, saying they're willing to invest money pretty quick. And these are...well, you probably know one of them in Omaha has public utilities. So they're willing to come in here and we'd better do something. [LB412]

GARY STAUFFER: Senator Louden, Senator Wallman, I think I understand the pressures that can develop to return shareholder value. That is a substantially different challenge than keeping low cost for the end-user. And I think that the model that Nebraska has demonstrated is clearly focused on the cost to the end-user. Now that's the all-in cost. You know, we're... [LB412]

SENATOR WALLMAN: Yeah. [LB412]

GARY STAUFFER: ...but those pressures that develop are essentially investor pressures that don't relate directly to the cost to the end-user. Difficult to combat but nonetheless, we've got to call them the way they are. [LB412]

SENATOR WALLMAN: But I think the rate users might be willing to pay a little more, you know, if we tell them what it is, tell them the truth. [LB412]

GARY STAUFFER: Senator Wallman and Senator Louden, I'm familiar with numerous studies about renewable portfolio standards, wind energy in general. And almost entirely they get wide support in the high 90 percent range. But when it comes time to

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actually pay the bill, it looks something different. Earlier, the chairman indicated that until money changes hands, it's all idle conversation. And I think, unfortunately, that's true. We do have to educate the consumers, not only in this state but every other state, that the low-hanging fruit and low-cost energy is probably something that our fathers and grandfathers enjoyed. Looking forward, low-cost energy is going to be a challenge that we're all going to be faced with. [LB412]

SENATOR LOUDEN: Questions? Senator Christensen. (Laughter) [LB412]

SENATOR CHRISTENSEN: Thank you, Chairman Louden. Mr. Stauffer, how soon will Nebraska have to build new power plants to meet expected needs? [LB412]

GARY STAUFFER: Senator Louden, Senator Christensen, I'm not an expert in this but recently sat in on a meeting with the Nebraska Power Association where they do a demand and a generation portfolio, take a look at where we stand. And I think it was around 2019. We've got enough capacity. Even though our entity is, MEAN is a partner in the Whelan Energy Center Two project, coal-fired power plant in Whelan. That meets a requirement we had because one of our contracts with NPPD terminates about the time we'll build that coal-fire plant. But in total, the capacity of this state is good for 2019, 2020. [LB412]

SENATOR CHRISTENSEN: When we build that next plant, will we have to build transmission lines? [LB412]

GARY STAUFFER: The Whelan Energy Center plant will have some subtransmission but it will not impact the grid, the statewide grid. [LB412]

SENATOR CHRISTENSEN: Thank you. [LB412]

SENATOR LOUDEN: Other questions for Gary? Seeing none, well, thanks for coming and testifying, Gary. [LB412]

GARY STAUFFER: Thank you. [LB412]

SENATOR LOUDEN: (Exhibits 19 and 20) And thanks for waiting around all afternoon. (Laughter) Other opponents? Okay, there's the American Forest and Paper Association in opposition to this bill because they listed black liquor as one of the products that couldn't be used. Other one, the Treated Wood Council also in opposition because of the forest products that couldn't be used for renewable energy. Okay, any more opponents? Those wishing to testify in neutral capacity? [LB412]

TIM TEXEL: Senator Louden, members of the Natural Resources Committee, I get the distinct pleasure of being last at this long afternoon. I will try to be brief. My name is Tim

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Texel, T-i-m T-e-x-e-l, and I am the executive director and the general counsel for the Nebraska Power Review Board, and that is the state agency that approves generation facilities in Nebraska and has primary jurisdiction over our utilities in these type matters. And I'm testifying in a neutral capacity on LB412. At its January meeting, the board authorized me to testify on this bill to address any procedural issues or any questions and to address a couple of technical matters on the bill. So I will not be dealing with the policy aspects of it. First, on one of the technical matters, one thing that I wanted to point out is I think there needs to be, if this bill were to be enacted, some mechanism that allows the board or another entity that the committee would see fit to release a utility from the RPS requirements if good cause can be demonstrated. I'm not trying to chip away at that, but the example I have is under LB412 if a utility doesn't meet the RPS, Senator McGill explained, the board would be required to impose an administrative penalty of three times the market value for each kilowatt short of the RPS the utility was. But LB412 doesn't allow any exemptions or any discretion on the part of the board for that. And I'm worried there may be some circumstances beyond the control of a utility, not just we didn't build it but that they couldn't possibly control and we'd have to penalize them for it. The example I would give is the village of Mullen, for example. In 2003, the board approved an application for a 1.25 megawatt diesel generation unit. At their hearing, they testified that one reason they wanted that is because they only have, it was either one or two lines into the village. They were concerned if those went down, especially in winter, people would be jeopardized, the health, safety, and welfare for the citizens. And I think as the recent January ice storm showed, that's certainly a distinct possibility. It may not be common, but it happens. And when it does, there's a danger to the public. If both those lines went down, Mullen would be operating on that diesel generator for as long as they could. And if...I would guess that the utilities would maybe repair those lines last because they knew that public might be safe. So they might be operating for, say, a month or two on diesel. That might well cause them to go over the RPS standard. So they may be paying three or four times their normal rate because they're operating on a peaking unit on diesel instead of lower cost. And then I'd show up and say, by the way, now you're going to get a fine for not meeting the RPS. And my board and I would prefer not to be in the position to have to do that to a community that I think is responsible, put in a backup generator, and we'd still come by and impose a fine. So I'm not asking for a blanket ability to let people out of this or utilities, but I think under certain circumstances, either ability to...if we institute the fine, for a utility to challenge that and maybe have a hearing before our board or a show cause hearing that my board could institute and say there may be criteria for this and we're going to give you this show cause hearing. You know, or either one, something along those lines I think would be justified in this type of bill. I'd be glad to work with the committee or Senator McGill's office on something like that if the committee would want that. Second, I wanted to address an issue of the RPS in relation to the Power Review Board approval criteria. And Jody and some of the senators may have heard this before, I've testified on this issue in previous testimony on RPS standards. When the board reviews a generation facility for approval, it uses standards

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set out in Section 70-1014. And those are that it must serve the public convenience and necessity, that the applicant can most economically and feasibly supply the resulting electric service, which is normally called the low-cost standard, lowest cost standard for the generation, and without unnecessary duplication of facilities or operations. The only exception to that is the special generation application, but that's limited to ten megawatts or less. And I don't think, if we're talking about an RPS, that most utilities would want to build large numbers of ten megawatts or less. They're going to want to take the economies of scale and build larger facilities. I think that would be a responsible thing to do. So the problem is with, like wind resources are not usually as low cost as conventional generation resources. That has come down dramatically in the past ten years. But with the cost of steel going up and some of that, I think the prices are starting to creep up. But they're still, from the evidence I've seen, are not as low cost as conventional resources. Not at the moment, anyway. As Mr. Stauffer mentioned, these resources are not dispatchable. You can't simply say we need them, flip the switch, and have them turn on like you can natural gas and coal, absent some mechanical failure or a rails problem. But normally, they are dispatchable and wind isn't and you can't count on the capacity. So the other problem is that there may need to be a backup generation to it, which would cause a duplication issue with our standards. So there's the way that my board's statutes cause us to look at a generation facility, like wind, I think would be in opposition to what an RPS standard does. Because we are there partly to make sure that the utilities are keeping the low cost for the ratepayers of Nebraska. And I would hate to be in a position where we're saying no, you can't build it, but they have an RPS standard where the Legislature says you have to build it. So I think that dichotomy really needs to be addressed if there was an RPS in Nebraska because we have a different mandate from our statute back in 1963 than what an RPS would impose upon our utilities. And that's a concern to myself and my board. I want to just mention that Senator McGill referenced the NPPD wind farm near Ainsworth, and you've heard it mentioned other times today, too. And the board approved NPPD's application but I wanted to note, NPPD did a very good presentation there of evidence. But it was, I believe, a 3-2 vote. So one vote, there wouldn't be a wind farm in Ainsworth. So my board took very seriously its role, that the wind farm wouldn't be as cheap as conventional resources. And I think the gentleman from the Sierra Club indicated that the reason Nebraska doesn't have more wind power is the opposition of the utilities. And I would submit another reason might be their concern about us disapproving a facility because it's not lowest cost and it might be duplicative to put in a wind facility. I don't know that for certain, but I have the perception that that certainly would be a concern if I was coming before my board, because of the standards we have and the problem with wind fitting into that system. And I think that's borne out with a 3-2 vote on approving a wind farm. So I wanted to point that out because I think whether you're a public business or a private business, uncertainty like that from a regulatory body is anathema. You want to know with some more certainty what your standards are and whether you can get approved. And our standards may be a hurdle, hopefully not a roadblock to that. So I just wanted to point that out. One last thing my board had asked

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me to suggest to the committee is, you know, the first issue I brought up is probably easier to address than the second one, changing our approval standards. And there's a number of bills this year dealing with renewable issues. And what my board, I think I testified on LB705 previously to the committee, what my board would like to suggest is that perhaps there should be some kind of comprehensive study what we should do toward renewable promotion in Nebraska. Then we could take into account the RPS, the C-BEDs, the PRB standards for approval and look comprehensively so that all those fit hand in glove, as I heard earlier today, and not in opposition to each other. Because we don't want to be a roadblock if the Legislature wants renewables and we want everything to fit together very well. And I think a comprehensive study similar to what was done in LR455 and completed in 1999 where everybody, interested parties would have a seat at the table, could look at this and come back to the Legislature or the committee and give recommendations about how to make this work as a general policy, my board felt might work better than somewhat different bills that might be a patchwork and not a comprehensive approach and they were concerned about that. So I wanted to bring that up. I think it's somewhat along the same lines as Shelley Sahling-Zart had brought up. And with that, that's the information I wanted to provide the board and I'd be glad to answer any questions. [LB412]

SENATOR LOUDEN: Any questions for Tim? Seeing none, thank you for testifying. [LB412]

TIM TEXEL: Thank you. [LB412]

SENATOR LOUDEN: Anyone else wishing to testify in a neutral capacity? Seeing none, then we'll close the hearing on LB412. (Exhibit 21) [LB412]

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Disposition of Bills:

LB412 - Indefinitely postponed.

LB629 - Advanced to General File, as amended.

Chairperson

Committee Clerk