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Natural Resources Committee  
March 01, 2013

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[LB402 LB567]

The Committee on Natural Resources met at 1:30 p.m. on Friday, March 1, 2013, in Room 1525 of the State Capitol, Lincoln, Nebraska, for the purpose of conducting a public hearing on LB402 and LB567. Senators present: Tom Carlson, Chairperson; Lydia Brasch, Vice Chairperson; Annette Dubas; Ken Haar; Jerry Johnson; Ken Schilz; and Jim Smith. Senators absent: Rick Kolowski.

SENATOR CARLSON: Welcome to the Natural Resources Committee hearing. I'm Tom Carlson, state senator from District 38, Chair of the committee. And I'll tell you who will eventually be in the chairs as we proceed in our hearing today. To my far left, and he's not here and won't be here today, is Senator Rick Kolowski from Omaha, District 31. Next to him will be Senator Ken Haar from Malcolm, District 21. And then this is Senator Jim Smith from Papillion, District 14. And next to him will be Senator Ken Schilz from Ogallala, District 47. To my immediate left is Laurie Lage, the committee counsel. And then to my far right is Barb Koehlmoos, our committee clerk. And next to her is Lydia Brasch, Senator Brasch, from Bancroft, District 16, and then Senator Jerry Johnson, from Wahoo, District 23. And to my immediate right will be Senator Annette Dubas from Fullerton, District 34. Our pages for today are Tobias Grant from Lincoln and David Postier from York. If you are going to testify, and I think we have quite a number of people that will testify today, make sure you pick up a green sheet from close to either door and get that information filled out legibly and have that with you when you come forward to testify. I'd ask that, as we move through this hearing, that you fill in kind of the on-deck chairs that are right behind the chair where you testify so that we can move smoothly from one testifier to another and we can help the hearing that way. If you do not wish to testify but want your name entered as being a part of the official record, that's the white sheets that are back by the tables. You can sign in on those, and this will be a part of the official record of the hearing. You can submit written information. If you don't wish to testify, excuse me, but you'd like something read into the record, you have the option of doing that. If you have handouts, hopefully, you've got 12 copies, and then the pages will hand those out. And if you don't happen to have that many, the pages can help you out on that. When you come up to testify, take the chair. And you don't need to adjust the microphone because it's sensitive enough it will pick you up. So some people do that out of nervous habit, but just try and stay off the microphone and it will pick up your voice. When you start to speak, give us your first name and last name and spell it, please. And if you don't do that, then I'll stop you and ask you to do that, again, to keep our records more accurate. Nobody on this committee uses electronics during the hearing, and so I would ask you to turn off your cell phones or put them on silence or vibrate so it doesn't disturb the committee. We don't allow any public displays of response or reaction to anyone's testimony and we keep things in good, cordial order that way, so I would ask you to follow that. We will use the lights system today. And when you sit down to testify, the green light will come on right in front of you. And the green light will be on for four minutes, and then the yellow light comes on. That tells you

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you've got a minute to go. And then the red light comes on at the end of five minutes, and I'll try to cooperate with you. If it looks like you're not real close to the end, I'll ask you to conclude as quickly as possible. And then, once we start asking questions, the timer is not on. But for your presentation, please keep that to five minutes or less. If we have, and it looks like we will have, a number of testifiers, I'd ask that you try not to repeat what other testifiers have said. If you agree with them, you might just indicate that I agree with the previous testifiers, rather than repeat. And I think that's the main thing that I wanted to go over before we start our hearing. Do you have any questions? Now how many of you are going to testify today? Okay, take your hands down. And this isn't to embarrass you. How many are going to testify today that have never testified before? Okay, there's several of you, and I'm simply saying this. I could imagine, if you haven't testified in front of a committee in a hearing like this, you may be nervous when you get up to the chair. Well, try not to be, because we're not going to bite. And, you know, this is a real important part of what we do in hearings because we're a unicameral. We have 49 senators that make policy. We don't have a house of representatives, so you take that place. And you have every right to come forward to testify if you like a bill, if you don't like a bill, if you've got suggestions to make it better, so try to enjoy your time and we'll try to help you enjoy it. We appreciate you coming. Any questions before we begin? Okay, well, we'll open our hearing on LB402. Senator Mello, welcome. [LB402]

SENATOR MELLO: Good... [LB402]

SENATOR CARLSON: He's moved the microphone, so we don't have to move it any more times the rest of the day. (Laughter) [LB402]

SENATOR JOHNSON: Strike one. [LB402]

SENATOR MELLO: (Exhibits 1 and 2) Good afternoon, Chairman Carlson, members of the Natural Resources Committee. My name is Heath Mello, H-e-a-t-h M-e-l-l-o, and I represent the 5th Legislative District in south Omaha. As this committee has undoubtedly heard many times, Nebraska consistently ranks in the top ten states in the country in potential for the development of wind energy. Despite repeated efforts by the Legislature to spur wind energy, however, Nebraska continues to lag behind our neighboring states in wind development. One of the key remaining barriers to the development of wind energy in Nebraska is the fact that equipment and supplies used by private developers to construct a wind energy project are subject to sales tax in most circumstances. As you can see from the map I distributed, nearly all of our surrounding states have sales tax exemptions for wind inputs. Currently, the only wind projects that can qualify for an exemption from sales tax are those which qualify under the Rural Community-Based Energy Development Act, or C-BED. Under C-BED, the equipment and supplies used to construct the projects are exempt from sales tax if at least 33 percent of the revenues from the project, for the first 20 years, flow to Nebraska

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residents, nonprofit corporations, or limited liability companies, LLCs, comprised entirely of Nebraska residents. Since the C-BED statute was adopted in 2007, only one utility-scale wind project has been able to qualify for the sales tax exemption. LB402 was designed to expand the C-BED law to allow more wind projects to potentially qualify for the sales tax exemption, which will help make Nebraska-based wind projects competitive with projects in neighboring states. The committee should have received a copy of AM442, which makes a handful of small, technical changes to the green copy of the bill. With the amendment, LB402 makes four primary changes to the C-BED law. First, the bill reduces the percentage threshold from 33 percent to 25 percent, making it easier for an outside private wind developers to utilize C-BED. At the same time, the bill redefines payments to the local community to include not just lease payments to property owners, but also component parts manufactured in Nebraska and services provided by Nebraska-based companies. This change has a practical effect of promoting broader economic development than just the wind farm itself, encouraging the manufacturer of wind turbines and other components here in Nebraska. In exchange for expanding the payments to the local community to include these inputs, the bill would remove local property tax receipts from the definition. LB402 would also loosen the restrictions on what types of business entities can meet the definition of qualified owner under C-BED. Currently, the only type of corporate structure allowed under statute is a nonprofit corporation or an LLC comprised of Nebraska residents. AM442 would add domestic corporations organized and domiciled in Nebraska, as well as cooperative corporations domiciled in Nebraska. This change allows a Nebraska business to undergo a C-BED project regardless of their chosen corporate structure but still stays true to the original intent of C-BED, that Nebraska citizens would be the primary beneficiaries of wind energy development in Nebraska. Finally, AM442 would expand C-BED to include renewable energy projects using solar, biomass, or landfill gas as a fuel source. The green copy of the bill included biomass and landfill gas but inadvertently left out solar energy. In addition to these substantive changes, LB402 includes a variety of cleanup provisions designed to consolidate the C-BED law in Chapter 70 of the Nebraska Revised Statutes. Currently, definitional language exists both in Chapter 70 and in Chapter 77. LB402 would leave the definitions in Chapter 70, with Chapter 77 simply referring back to those definitions. While multiple pieces of legislation have been introduced this session to promote wind development, I believe LB402 represents the best path moving forward. The C-BED concept, while underutilized, is a well-known incentive, both in Nebraska and in a number of other states. Because LB402 is a revision of an existing incentive and not a new one, the bill is the most viable vehicle to promote Nebraska wind right away. My office received a copy of the fiscal note for LB402 and, based off the language from the Legislative Fiscal Office, the Department of Revenue based their projections off information they received from the Nebraska Energy Office. As others behind me will, no doubt, testify, there is some question as to whether the information provided by the Energy Office is applicable to LB402, particularly given the fact that not all wind projects will be able to qualify for a...as a C-BED project. My office has sent a letter to the Nebraska Energy Office

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requesting more information on what they shared with the Department of Revenue, and I will continue to work with the Legislative Fiscal Office to ensure that we have a fiscal note that is based off the most accurate information available. Representatives from the wind industry, public power, the Nebraska Farmers Union, and Nebraska landowners are here to testify behind me. They can give a greater picture of the benefits of wind energy to Nebraska communities and the need to act sooner rather than later when it comes to wind development. Thank you for your time, and I'd be happy to answer any questions the committee may have. [LB402]

SENATOR CARLSON: All right, thank you, Senator Mello. Questions of the committee? Senator Smith. [LB402]

SENATOR SMITH: Thank you, Chairman Carlson. Senator Mello, thank you for your introduction of this bill. A couple questions. So the fiscal note, where it stands right now, is that roughly \$8 million? [LB402]

SENATOR MELLO: That would be over the biennium. That's the current fiscal note, yes. [LB402]

SENATOR SMITH: So we would have...would these projects have developed without this bill anyway? Without this bill, would we have seen these projects go forward, in your opinion? [LB402]

SENATOR MELLO: Well, I think there's a point of clarification, Senator Smith, as it relates to what these, quote, unquote, proposed projects are and as a Legislature, no doubt, knows that part of the job of the Appropriations Committee Chair is to also defend the fiscal note process and the fiscal notes that come from the Legislative Fiscal Office. Even at times I may have a disagreement with those fiscal notes, but as I've mentioned to other senators before, it's incumbent upon the senator themselves to approach the Fiscal Office with concerns or request of providing new information regarding the fiscal note. As I mentioned in my testimony, when we received the fiscal note we had some concerns in regards to the origination of the information that came from the Nebraska Energy Office, in part because some of the projects that we believe that they may have used were extremely large projects that, one, would not qualify...one, that were extremely large projects, I should say, first off, and a project that they may have utilized that doesn't even qualify for C-BED because it's a completely public power district project based in Lincoln through LES. At this point, there is...we have concern in regards to if there is any particular projects that may be in the wind development pipeline that would have qualified for C-BED, and so when...with your question, respect to your question, would these specific projects have occurred without this piece of legislation, we don't know exactly what projects are even being utilized at this point to determine a fiscal note from the Nebraska Energy Office. And until we can get that information, ultimately, we think that the fiscal note will be revised, depending

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upon the information that we can prove that those projects wouldn't have qualified originally for the existing statute and/or were considerable larger projects than would traditionally be considered under a C-BED statute. [LB402]

SENATOR SMITH: Okay, thank you. [LB402]

SENATOR CARLSON: Okay, other questions? Senator Johnson. [LB402]

SENATOR JOHNSON: Thank you, Senator Carlson. Thank you, Senator Mello, for coming in with this. In light of where we're at on some discussions with the changing in sales tax exemptions, you might be familiar with that, incentive programs like this are a different type of an exemption based on something being totally exempt from the system. How do you see this being viewed as we move forward? I mean, is the timing for this right, or is this going to get adjusted, most likely get adjusted in a study? [LB402]

SENATOR MELLO: Well, I think the unique thing--and without speaking, I would say, too much out of school, since I think there's two other bills in the Revenue Committee that involve creating new sales tax exemptions--... [LB402]

SENATOR JOHNSON: Correct. [LB402]

SENATOR MELLO: ...the existing C-BED law allows for a sales tax exemption. The uniqueness, though, is the underutilization of it is what we're trying to address in LB402, based on the size of projects that normally would qualify for a C-BED project. These are not going to be 250 to 300 megawatt projects, ultimately, that were envisioned, I believe, with the creation of C-BED, since they are community-based projects. Ultimately, with what we're trying to do is lower the threshold of the spending amount that a payment, so to speak, under the current statute, from 33 percent to 25 percent, but in that same process, to try to encourage more of that spending to be localized in Nebraska, where right now that 33 percent could be spent outside of Nebraska to some extent, of...or, actually, I should say, that percentage would be more towards a lot of the land lease payments, so to speak, where the change we're trying to make is to incorporate other components of a wind project that would qualify for it. For example, some of the services that go into it, some of the machinery, some of the turbine products and parts, as well as the labor, that would qualify for...under our bill, LB402. No doubt, when you...any time you talk about sales tax exemptions, Senator Johnson, particularly in light of the tax debate that occurred earlier this session, those issues come under to...under a microscope, and I think the unique thing, though, is this is an exemption that's been underutilized, and I think the reason and rationale for exemptions, policy-wise, has been to try to spur development and/or to try to provide a competitive advantage to a certain industry in Nebraska in comparison to maybe neighboring states or other parts of our country. The reality is this committee has heard, no doubt, multiple bills prior to...of Nebraska's unique competitive advantage when it

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comes to wind development. The reality, though, is that we haven't seen that wind development with some of our existing statutes in place as well as some of the proposals that are...have been brought forward in years past. It's my view that LB402 is trying to modernize what we have, I think, as a good existing C-BED law. But for one reason or another it's been underutilized, and I think, kind of, with the, I would say, the very diverse coalition that's here today to testify after me will provide their rationale and their reasons of why they see LB402 of being a viable vehicle moving forward for wind development, both in regards to purchase power agreements with our public power system in Nebraska, but also provide some opportunities still for export, wind energy export, which I know has been a priority of this committee in years past. [LB402]

SENATOR JOHNSON: Thank you. [LB402]

SENATOR CARLSON: Any other questions? Thank you, Senator Mello. Will you be here to close? [LB402]

SENATOR MELLO: I will plan on...I have to go back to Appropriations Committee, but I plan on returning to close if needed. [LB402]

SENATOR CARLSON: Okay, all right, thank you. All right, we're ready for proponents and, as I've asked you, move up into the on-deck chairs here so that we can move forward. And that way, those of you that want to be first, you have an opportunity to be toward the front end here. So welcome, John. [LB402]

JOHN HANSEN: (Exhibits 3-5) Good afternoon, Chairman Carlson, members of the committee. For the record, my name is John Hansen, J-o-h-n, Hansen, H-a-n-s-e-n. I am the president of Nebraska Farmers Union and am also their lobbyist, and I am also the cochair of the Nebraska Wind Working Group. Excuse me. We...I have three things in the handout today. I have my written testimony, which really is a history of how we got here and all the things that went into the development of LB629 and, kind of, the sticking points and the rationale for why we did it and for both the sales tax abatement as well as the process itself that brought the consensus in order to move LB629 forward. It also has, as a part of the handouts, the latest information from the American Wind Energy Association, which...and the most current information is consistent with this handout, which is several months older, but it compares Nebraska relative to the amount of wind energy developed also. So it has the megawatts. It also has the percent. And so the percent of Nebraska is a bit low. It's higher than that. I would estimate it about 3 percent as a state. But when you compare our Nebraska to our neighbors, we have South Dakota that gets about 22 percent of its total electrical generation capacity from wind. We have Iowa with about 18.9. You can go around the neighborhood and you can see that, both in terms of megawatts and also as a percentage of the portfolio, that Nebraska is not keeping up with the neighborhood, despite the fact that we have the third best wind regime in America. And so we have

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world-class wind resources and we are not only not keeping up with the neighborhood, we're falling a bit behind. And so if you go back in time and compare us to where we were to Kansas, South Dakota, Colorado, certainly Iowa, four years ago, they continue to move forward at a much faster rate than we do. So as a result of that, we thought that it was particularly appropriate for us to revisit the C-BED law and see what we could do and work with a wide range of partners to try to find a pathway forward that would accelerate the rate at which we're able to use this law passed in 2007. The last handout is the most recent data from the Database of the State Incentives for Renewables and Efficiency, and it is the reason why there is some sense of urgency for us to be able to move a wind bill forward, out of the Legislature, as soon as possible, this year, because the production tax credit was extended but only for projects started in 2013, so...and it was extended at the same \$0.022 cents rate, which is...applies for the first ten years of the operation of the project, so that's a huge incentive. And so if our state can update our current law, then we hope that there will be some additional projects that we'll be able to, hopefully, get started yet in 2013. We have, relative to the fiscal note, if I just might comment on that a bit, we have three projects that currently have power purchase agreements in the state of Nebraska. We have a 75-megawatt project at Broken Bow. We have another 75-megawatt project at Steele City, and another 200-megawatt project at Elgin. Those are the only projects that have power purchase agreements and are set to go forward with potential construction this year. And they're either going to be C-BED or non-C-BED, and they're all non-C-BED now. And I suspect, given the timeliness of trying to get started this year, they're not going to stop and restructure their project in order to take advantage of C-BED. So the fiscal note, in my opinion, double counts some of the projects, and so they're going to go one way or the other. And the only projects in the queue that I know of that are far enough along in the short term to get going are a 12-megawatt project in Burt County, which is ready to go--it's cleared its transmission studies; it is ready to go forward--and the potential project up in Dixon County of 150 to about 200 megawatts, and that particular project is not likely to be a C-BED project. So I think the fiscal note, when we get all said and done, will be much smaller. In my written testimony I lay out the process, but I also think that it is a good bargain for us to allow in more Nebraska content. And if we use more Nebraska services, we use more Nebraska ownership, we expand to allow Nebraska-based corporations and cooperatives, and we do all of those things, this will help us continue to earn the tax abatement because we get two to four times more economic development benefits and more local state tax revenues to be able to offset the sales tax abatement. And with that, I'll be glad to end my testimony and answer any questions if I could. [LB402]

SENATOR CARLSON: All right, thank you for your testimony. Questions? Senator Haar. [LB402]

SENATOR HAAR: Thank you, John. You mentioned the production tax credit, which Congress may or may not continue to extend. Shouldn't wind have to play on a level

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playing field? I mean, here we're giving incentives to wind. How do you answer that question? It's a leading question. (Laughter) [LB402]

JOHN HANSEN: Well, it's...I think it was President Truman, Senator Haar, who said he needed a good, one-armed economist so that you couldn't say, on one hand, then on the other hand, and...but in this particular case, I think that you've got to put all of the incentives for all of the other sources of energy also on the table, know them, understand them, and measure them and compare them. And the incentives for wind were designed from the get-go to be able to offset the incentives from the other sources of energy. And so when you do that, wind has come down dramatically, and so some of the latest information that we dug out said that from 1980, for example, the price of wind has dropped 90 percent, and so that continues to come down as we get more real-world manufacture and experience. There is...you can put stuff on a drawing board for so long. But after a while, the best way, in order to really get manufacturing efficiency and all of those things, is just experience. And so we have made tremendous progress. A 2012 DOE study, for example, said that, according to the Lawrence Berkeley National Laboratory shows that it costs between 24 and 39 percent less to produce wind energy on a per-kilowatt-hour basis today than it did just in 2002 and 2003. And so I think eventually we're going to be phasing down those incentives. But as a state, if we want to diversify our portfolio, it behooves us to take advantage of those incentives while they exist. And if you look at ethanol, for example, it was a combination of our state and our national incentives that helped build Nebraska's ethanol system so that we're the number two ethanol-producing state in the country. So when you get the state and the feds going the same direction, it's a good thing. I am unable to predict the future path of the feds. [LB402]

SENATOR HAAR: But you're implying by your answer that coal, gas, and oil get incentives right now. [LB402]

JOHN HANSEN: Yes, they do. [LB402]

SENATOR HAAR: Lots. [LB402]

JOHN HANSEN: Yes, they do, and so, you know, our view is that we'll be glad to put our incentives on the table when their incentives are on the table also. [LB402]

SENATOR CARLSON: Senator Smith. [LB402]

SENATOR SMITH: Thank you, Senator Carlson. Let's have a discussion then a little bit about the incentives and comparisons. Tell me, what incentives would a gas turbine have that's constructed by a private...I know right now we have public power. But let's say you were talking about wind power. Let's talk about constructing a gas turbine. Do they currently have an incentive? Would they have an incentive? [LB402]



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JOHN HANSEN: Senator, to be perfectly honest with you, I don't know what those incentives are, and I didn't prep for that today and I...so I haven't researched that, and so I'm not much help to you on that. [LB402]

SENATOR SMITH: All right, but you did make that comment that there's those incentives, so I'm not certain what they are and what they would be if they are. [LB402]

JOHN HANSEN: Right. [LB402]

SENATOR SMITH: But in your testimony you talk...you say LB629 would allow for a public power system to partner with private sector interests that could use the federal tax credits so that wind energy development could go forward in the most cost-effective manner possible. Rural economic development and energy were appropriately and intentionally paired in the intent language, and that's good. Would you then be interested in expanding that language to allow for other types of generation that would benefit rural economic development and that would be cost-effective and stand on its own two feet? I mean, so you're not just hung up here on wind energy. If it would be to the benefit of rural economic development, you would consider other things, other than just the wind generation? [LB402]

JOHN HANSEN: We...it...in this LB402 update, we expanded from other kinds of renewable...included other kinds of renewable energy. And so, from our perspective, if you own the land and the natural resources, it behooves landowners to always look for different kinds of ways to take advantage of the natural resource bases they have. And so cellulosic ethanol, corn ethanol, biodiesel, wind, solar, all of those things and more are a part of us taking advantage of the natural resource base that we have. And so we're...you know, we have multiple sets of considerations for us as an organization. We want to take advantage of those natural resources and develop more renewable energy, especially when those dollars come back to rural Nebraska, but we also want to protect the integrity of the public power system. And so that is a system that has served our state extremely well, in particular, rural Nebraska. [LB402]

SENATOR SMITH: So you're going to protect public power only to the degree of renewable energy because then the renewable energy generators would be private. So the only exception you would make to the public power model is for the renewable energy generators. [LB402]

JOHN HANSEN: At this point in time that would be correct. [LB402]

SENATOR SMITH: Okay, so it's not entirely about rural economic development? [LB402]

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JOHN HANSEN: All things in good balance. And, you know, in our...from our perspective, our public power system has historically not only provided very high-quality, dependable, low-cost electricity, but it has helped us in agriculture have the tools to be able to utilize and develop our business. But it's also been, in terms of rural economic development and recruitment, it's been one of the leading offsets to our state's relatively high property taxes, and so we're not inclined to throw the baby out with the bathwater. We recognize that the public power has provided our state a lot of benefits, and so we want to partner with them, work with them, in order to be able to continue to find new and better ways to move our state forward, if that's an acceptable answer. [LB402]

SENATOR SMITH: All right, thank you. [LB402]

SENATOR CARLSON: Okay, any other questions? John, I'll ask one, because looking back, and you had mentioned 2007, when the C-BED bill was passed...and I know you've done a lot of work and a lot of research and a lot of effort into this thing. But would you say that the response to it at this point is disappointing? [LB402]

JOHN HANSEN: I would say that it's been disappointing in that we haven't had more smaller projects come forward and that there's a fairly complicated list of reasons why that hasn't happened. But yes, it's disappointing that it hasn't come forward with more projects, and so, you know, we have had to go back and look at the law with other partners. And we've been a part of a lot of different conversations to get here and say, yeah, we need to work with you and we need to find an acceptable way to expand the use of C-BED. And so the inclusion of Nebraska-based corporations and cooperatives, for example, is a substantial expansion of that and we think that it's really a positive to be able to use, as a part of the inclusion of the criteria, not just local land ownership, but also those companies who provide services. And when you come to wind conference, you see all of those vendors and you see that huge amount of economic activity and all those professional services, development services. Their...the hallway...the exhibit room is full and overflowing into the hallway because there's a huge industry that grows up around wind development and we want to make sure that our Nebraska companies have a better foot in the door to be able to participate in this. And so that brings us to why we're in support is because we think we can...our potential is a lot better than what we've been doing. [LB402]

SENATOR CARLSON: Okay, and I recall and I feel like back in 2007 you were very positive oriented that that bill was going to really make things take off. So are you comfortable and confident that LB402 or something like it would really work? [LB402]

JOHN HANSEN: Fair question. In 2007...you have to walk before you run. And given the six weeks of very intense negotiations that got us to where we started on LB629 in 2007, that was simply as far as we could all get together to go, and that was a positive

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step forward. And we said at the time that if we needed to make adjustments on down the road, we would be an honest partner and participate in those evaluations and discussions. And so the changes we've brought before you today in LB402 I think are, from my standpoint based on my background in public policy but also my background as a part of having helped participate in a successful wind project, is that this is a pretty dramatic expansion of the operating room and the flexibility, and I think it's a pretty substantial departure from what we have been doing, and it's substantial enough that I think it gives us a good shot and we need to try it and see if it works. I...this is a...as steps go, this would not be minor. This represents a pretty substantial increase, in my opinion, and I hope it works. [LB402]

SENATOR CARLSON: Okay. All right. Senator Smith. [LB402]

SENATOR SMITH: Thank you, Senator Carlson. I'm going to go back to that line of questioning I had before and try to put it a little bit more in perspective where I'm coming from on this. I tend to be in agreement with the diverse portfolio. And I've read the bill. I'm not terribly opposed to the bill. I think it's a great opportunity to develop that source of energy production. And particularly, in a market where you can have that firm purchase power agreement, you know, there's very little risk involved there. I think that's a great idea. But the cost comparisons you were making earlier and your talk about wind becoming so competitive, often, when you look at those comparisons, it's because you're not adding back in the cost of capacity, which is...which provides...it's that backup power that provides the redundancy for when the wind is not blowing. And again, a lot of times when you've got peak needs, that's when the wind is not blowing, I mean, and I get that. That's...everyone understands that. But there's still a market for the renewable piece. But when you add the capacity back in there, that redundancy, such as a gas turbine or a coal plant, that's when it affects the cost comparison of the types of energy. So going back to my original question, what if...I mean, if you're looking at really long-term planning where you have to add that capacity piece into it and you have to have the reliability, the redundancy, and so you have that need for some type of a base load or a combustion turbine, something other than the renewable, I mean, isn't that something we're eventually going to have to deal with, if we're going to attract developers that are going to have to add a capacity component? Or do you just see that falling back on public power to meet that redundancy at a duplicate cost to the consumer? [LB402]

JOHN HANSEN: I have two different kind of lines of answer, I think, to your question to do it justice. [LB402]

SENATOR SMITH: But do you understand what I'm asking. [LB402]

JOHN HANSEN: Yeah, I do. But first of all, the data says when...you know, that when you're comparing apples to apples and oranges to oranges, you can't compare new

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apples to old apples or old oranges. And so if you're going to compare wind to any of the other sources of generation and you're going to compare new wind, you've got to compare new wind to new coal and new nuclear and new anything else, new natural gas, new peaking plants, new whatever it is. And so when you do that, that's kind of breathtaking because then you get an appreciation for how competitive new wind is. And if you compare, on the other side of the coin, when you're looking at old, established forms of energy, there just isn't anything cheaper than old wind, when you're looking at old coal versus old anything else. To your point, the experience, going back to the manufacturing efficiency and how costs come down, we're also seeing more and more states that are able to use a higher percentage of their total portfolio that comes from renewables. And they get much more efficient and able to manage those things in an effective manner. So where we used to start out, when I started, and this 10 percent was...everybody was like, oh, if we get up to 10 percent from renewables, this will be...and so now we have states that are not only at 25 percent, but they're saying we can do 30, 35, and we even hear talk of 40. And these are coming from private sector utilities. We're also seeing research and data coming in about storage and different kinds of storage systems that up it even past that. So it's, in our view, this has never been either/or. It's always been and/or. And what we would argue is that our state already has more than enough base load now to provide the base load. And so as we look at expanding, it behooves us to use the economically advantageous wind that we could lock in for 20 years. We can't lock in the other sources of energy for 20 years. We can lock in wind for 20 years, and we already have the base load. So that seems like a... [LB402]

SENATOR SMITH: But you're repeating what I just said. I understand we have the base load. [LB402]

JOHN HANSEN: Yes. [LB402]

SENATOR SMITH: But with the direction of the EPA, we're not always going to have that base load. We're going to have to find new sources of base load to back up the capacity, if you would,... [LB402]

JOHN HANSEN: Yep. [LB402]

SENATOR SMITH: ...because when the wind is not blowing, what form of energy are you going to use to supply that need? And so long term is what I'm talking about. I'm not talking about right now. [LB402]

JOHN HANSEN: Right. [LB402]

SENATOR SMITH: We have the base load right now. Long term, we're going to have to have the backup generation. So that's what I'm saying. Long term, we're probably going

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to have to address this in order to provide incentives, for whenever they're constructing the wind, they're also constructing that backup, that capacity piece of it. [LB402]

JOHN HANSEN: Sure. And we understand that. But I would also just say that Iowa is already getting right at 19 percent of their current generation from wind and making it work and having sufficient reliability and redundancy in order to provide the necessary energy needs. And South Dakota has 22 percent. Minnesota is at 25 percent, and so on down the road we may get there. But right down the road is a fair ways down the road when you're sitting at 3 percent. [LB402]

SENATOR SMITH: Thank you. [LB402]

SENATOR CARLSON: Okay, any other questions? Senator Brasch. [LB402]

SENATOR BRASCH: Thank you, Mr. Chairman, and thank you, John, for coming to testify today on this bill. And I do find this very exciting and interesting in the sense that it is rural-based energy development, where our ag producers are now having the capability and capacity not only to produce crops, livestock, and now energy. It's a new horizon. And my question would be, as I've seen...I've been to the OLean Energy, where they've taken methane, they're making energy there, producing it, selling it back to the public power district. And in Fleischman's also in Burt County, I think they're using solar. There's several rural areas starting to be merged into the energy field. And as we're talking about the pace it's moving, would you...what is the greatest barrier? Is it creating that partnership, the transition between what we know today and what we must do to help grow this or, you know, what would...is there a multitude of hurdles or just a step at a time and we learn as we go? [LB402]

JOHN HANSEN: Well, thank you, Senator Brasch, I think. (Laughter) I think there are a lot of different kinds of reasons why we're not moving forward. And if you look at it in terms of the big picture, when the economy is flat, base load is flat, and so it is a fundamentally different task to try to sell additional generation into our domestic market for utilities. When the market is flat, the price of their surplus electricity is far lower than it was just several years ago, and they're not in need of additional energy of any kind in particular. And so when the economy is flat, then that's a different sell than it is when you have a more healthy economy and a growing portfolio that you can then diversify. And so that's not an insignificant...I mean, that's a pretty significant part of it. But it's also, you know, as a state, we're...we were kind of late to the dance in...you know, compared to other states, and we're still learning. We're still learning how to get there. And so I always think it's kind of a combination of, you know, getting more comfortable, for example, with net metering for small wind in smaller-sized units. You know, we...since that law has been passed, our state seems to have done fairly well. There doesn't seem to have been very many problems, and so now that might be an appropriate time to kind of update the small wind part. But we have also gotten a lot

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more comfortable with wind, and so there's nothing like success in order to be able to calm fears. And so it's...when you're driving down the road and you see wind turbines out your window, all over the place, it's hard to argue that it's not working because it is working now and before it was just a concept. So a part of it is just a comfort thing. We've also had stop and start incentives at the federal level, and so I...you know, solar is coming down. It's coming into its own on things. So I continue to be an optimist and continue to believe that those kinds of renewable energy are in our economic interest. And, you know, if they're in our economic interest, Nebraskans have enough initiative and entrepreneurship to figure out a way to make them work, and sooner or later we're going to get there. [LB402]

SENATOR BRASCH: Very good, thank you. [LB402]

SENATOR CARLSON: Okay, thank you. Any other questions? Okay, thank you, John, for your testimony, and good luck on your flight. [LB402]

JOHN HANSEN: Thank you. [LB402]

SENATOR CARLSON: Okay. Next testifier. Welcome. [LB402]

ADAM HERINK: Good afternoon, Chairman Carlson and members of the Natural Resources Committee. My name is Adam Herink, H-e-r-i-n-k, and I'm with Bluestem Energy Solutions. Bluestem is Nebraska's only renewable energy developer to execute a PPA, own, and operate a wind facility in Nebraska. Through this effort and others, we have an understanding of the potential benefits for Nebraska. To sum these benefits up, one of the best ways to create economic stability is by harvesting natural resources and selling those to those who need them. Nebraska has a tremendous natural resource in its wind, third or fourth in the country. Because of this, we feel, as a state, we need to create an environment which promotes wind energy development. For opponents of this theory, I would recommend looking at other Midwestern states with similar wind regimes and research their efforts and results. Nebraska currently has 457 megawatts of wind installed. Per the American Wind Association, Wyoming has 1,410 megawatts; Oklahoma has 2,400 megawatts; Colorado has 1,805 megawatts; and Iowa has 4,536 megawatts. These states surrounding us with the most wind installed have a sales tax incentive. Because Nebraska's resource is much larger than its demand, Nebraska will need to export wind and compete against projects in these states. As we do this, we will compete against these other states' regulatory environments. Currently, Nebraska's wind carries roughly a 5.5 percent premium when competing against projects in Kansas, Colorado, Oklahoma, and Iowa. This premium hinders the ability to compete in wind. Our company, Bluestem, has an export project in Cherry County, Nebraska. Our landowner partners want wind energy to attract investment to their sparsely populated county and lower their property taxes. If the Cherry County project can't compete in wind in an export environment, there will not be a project. Cherry County and Nebraska

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could lose out on the opportunity to attract investment to rural areas and lower property taxes. Sales tax is not the only hurdle in the future of Nebraska's wind energy future, but is an important one and one we can control today in preparation to take advantage of Nebraska's natural resource, for new opportunities to harvest natural resources and distribute them to a large population base does not come along every generation. And with that, I'd be happy to take any questions. [LB402]

SENATOR CARLSON: Okay, thank you for your testimony. Questions of the committee? Senator Smith. [LB402]

SENATOR SMITH: Thank you, Senator Carlson. Thanks for coming in and for your testimony. Appreciate it. So you would be looking to be the manufacturer as well or the producer? You would construct the generating sites? You'd be the producer. Would you also maintain and operate? [LB402]

ADAM HERINK: Bluestem would be interested in all those services and we...you know, maybe with some partners. But yeah, the development, sale, and operation of a wind farm is our mission for Cherry County, for example. [LB402]

SENATOR SMITH: Okay. In terms of an operation of a wind farm, what is typically the maintenance of a farm like that? Because the blades have to be cleaned periodically if there's a regular...the gear box needs to be maintained, things like that. What is the typical maintenance program for a generation farm? [LB402]

ADAM HERINK: What I can do is reference the wind farm our company currently owns, and right now we do annual maintenance...or biannual maintenance, twice a year, and then we have a service team for any issues that arise unexpectedly. [LB402]

SENATOR SMITH: So do they have to be washed down, cleaned, all the bugs removed? I know in some northeastern states and western states there's salt formation on the blades that have to be cleaned off. Is that part of the maintenance? [LB402]

ADAM HERINK: That would be part of the biannual maintenance, yes, cleaning the machines, yeah. [LB402]

SENATOR SMITH: Biannual maintenance, okay, all right. And then in terms of any type of decommissioning, that there's a failure on a blade, the blade has to be disposed of...and I know it's difficult to recycle those. Is that your responsibility then as the operator? [LB402]

ADAM HERINK: Yes. [LB402]

SENATOR SMITH: That's part of your operating budget? [LB402]

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ADAM HERINK: It would be in our landowner contracts and possibly the PPAs that we would be responsible for those machines for the life and after, you know, after the useful life or if something happened to one of them. [LB402]

SENATOR SMITH: Okay. And then just one other thing about that. When it comes to maintenance of that, the fluids...the detergents and things of that nature that are used to clean those blades, how is that disposed of during your regular maintenance? [LB402]

ADAM HERINK: You know, to be honest with you, we hire service groups to do that, and I'm not completely sure at this time. [LB402]

SENATOR SMITH: Okay, because there's lots of those types of companies around. It's kind of a growing market for them, I take it. [LB402]

ADAM HERINK: Um-hum, yeah. [LB402]

SENATOR SMITH: All right, so that's a question for someone like that. Okay, thank you. [LB402]

ADAM HERINK: Um-hum. [LB402]

SENATOR SMITH: Appreciate it. [LB402]

SENATOR CARLSON: Okay, any other questions? Just to follow up on Senator Smith's question, how do you wash a blade? [LB402]

ADAM HERINK: With a crane. And washing the blades wouldn't be part of the biannual. [LB402]

SENATOR CARLSON: With a crane? [LB402]

ADAM HERINK: Cleaning the inside of the nacelle and the base of the turbines would be more of a realistic biannual maintenance program. [LB402]

SENATOR CARLSON: I'm sorry, I missed...so you don't clean the blades? [LB402]

ADAM HERINK: No, not on an annual basis. I missed that. I thought you were just talking about the nacelle and the tower, so. [LB402]

SENATOR CARLSON: How often would you clean a blade? [LB402]

ADAM HERINK: We wouldn't be cleaning the blades. They... [LB402]



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SENATOR CARLSON: You don't...in the lifetime, you don't have to...that's not a factor? I don't know. [LB402]

ADAM HERINK: No. I mean, you know, I guess something could get up there that you'd have to get off and you'd have to get a crane in there to clean it. But, you know, they're moving a lot, and so, they, you know... [LB402]

SENATOR CARLSON: And I have an idea, yes, how fast the end of the blade moves. I don't want to get in the way. (Laughter) [LB402]

ADAM HERINK: Yeah, exactly. (Laugh) [LB402]

SENATOR CARLSON: Okay, any other questions? Okay, thank you for your testimony. [LB402]

ADAM HERINK: Thank you. [LB402]

SENATOR CARLSON: Next. Welcome. [LB402]

MIKE ZAKRZEWSKI: Thank you. My name is Mike Zakrzewski, Z-a-k-r-z-e-w-s-k-i. I'm a third-generation farmer and rancher from O'Neill, Nebraska. I'm a member of Nebraska LEAD, class 23, and I'm also a chairman of the landowners group for Grand Prairie Wind Energy Project. We are a 400-megawatt wind farm that encompasses about 50,000 acres in northern Holt County. I'm here today to testify in support of LB402. We've been working for about seven years now in the predevelopment phase of our project, and the finish line is finally in sight. We hope to be shovel ready sometime this summer. When we're completed, we will be the largest wind farm in Nebraska to date, and I believe we'll be the first to offer exportable energy to end users. I believe exportable wind energy has the potential to bring real and significant property tax relief to Nebraska through contributions to our tax base by out-of-state entities. Our project alone will generate about \$1.4 million annually of property tax revenue via the nameplate "capacity tax." It will also generate a similar amount of revenue annually in lease payments to Nebraska landowners and taxpayers. And with the estimated overall cost of our project at just under \$1 million, it will have an obvious economic boom to the state and to our local community. I believe the wind industry's request for sales tax exemption is a fair and reasonable request. With our project right now, we are in the process of submitting bids to sell our energy. And I can tell you that this tax inequity with projects from other states is a very real and very formidable obstacle for our success. We've already lost out on a bid by a Fortune 500 company for a fairly significant amount of wind energy, and this tax inequity was definitely a factor in losing out on that bid. I believe C-BED is the right vehicle to remedy this issue. I think when you combine the many benefits of a thriving wind industry in Nebraska with the in-state spending

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requirements of C-BED, I think we could see some amazing results. As a Nebraska landowner and taxpayer, I do not take lightly any request for tax exemption. But in this case, I think the investment...the return on the investment by the state should be substantial. And so I would ask for your consideration to please support LB402. [LB402]

SENATOR CARLSON: Okay, thank you for your testimony. Questions? Yes, Senator Haar. [LB402]

SENATOR HAAR: Yes. I'm sorry, I didn't get the name of your company. [LB402]

MIKE ZAKRZEWSKI: Our developer is Midwest Wind Energy. [LB402]

SENATOR HAAR: Okay. [LB402]

MIKE ZAKRZEWSKI: I'm a farmer, just a landowner. [LB402]

SENATOR HAAR: All right, okay. That's it. Thank you. [LB402]

SENATOR CARLSON: Okay, any other questions? Thank you for your testimony. [LB402]

MIKE ZAKRZEWSKI: Thank you. [LB402]

SENATOR CARLSON: Next. Welcome. [LB402]

JOHN ATKEISON: (Exhibit 6) Well, thank you. Good afternoon, Senator Carlson, members of the committee. I'm John Atkeison, A-t-k-e-i-s-o-n, representing Nebraska Wildlife Federation. We feel that the C-BED law was created to stimulate the development of renewable energy in Nebraska in a way that captures a significant share of the economic benefits for local communities. It does that in part by providing a sales tax exemption incentive for projects that qualify under the law. We support the concept embodied in the law and support policies that promote the development of clean, homegrown Nebraska energy. We understand that the law as crafted has not been as successful as hoped in promoting the development of community-based energy sources. That development has been hampered by a number of factors including that Nebraska electric utilities have been slower to embrace wind energy than utilities in surrounding states, the large scale that has become the industry standard for wind farms, and in some cases the restrictions of the law itself. We support efforts to streamline the C-BED statutes that are included in LB402. We also support the inclusion in the C-BED statutes of solar energy as an eligible energy source. As we show in our report, "Harness the Sun," which I gave to you the last time I was here, the cost of solar photovoltaic energy in Nebraska has been dropping at a rapid rate. Cost-effective, solar PV can be done at a much smaller scale than a typical modern wind farm. So the

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C-BED model could prove to be a very attractive way to promote local solar development. The bill also highlights the competitive disadvantage in Nebraska tax law of renewable energy versus fossil fuels. The bulk of the cost of power from a coal-fired or gas-fired power plant is in the fuel, and under Nebraska tax law no sales tax is paid on that fuel. The bulk of the cost of power from wind or solar energy is in the purchase of the wind tower or solar array, but those are taxable under Nebraska sales tax statutes. So current Nebraska tax law discourages utilities from adopting clean, local sources of energy like wind and solar and encourages them to build power plants that generate much more pollution and send hundreds of millions of dollars out of Nebraska to buy coal and gas. LB402 does not completely correct this unfair imbalance, but it is an important first step. So we support LB402 and look forward to your questions, particularly if they're ones relating to the solar aspect of this because we think...I personally think that solar is in a position to give our wind resource a run for its money because of its new economics and its ability to scale. [LB402]

SENATOR CARLSON: Okay, thank you for your testimony. Questions from the committee? I'm going to ask you one thing. In the third paragraph of your statement here, "Nebraska electric utilities have been slower to embrace wind energy," and we could say, "and solar energy." [LB402]

MIKE ZAKRZEWSKI: Um-hum. [LB402]

SENATOR CARLSON: But I think this is because we produce more than we use. And it would seem to me that...and maybe it's getting there, and I hope it does. But it would seem to me, if wind and solar were cheaper than coal, we'd be doing that right now. And so I don't know how you...we haven't forced. But how do you get electric utilities, power companies, to embrace something that's costing them more than what they're producing right now, and it's more than we need? [LB402]

MIKE ZAKRZEWSKI: I think you make some good points in terms of the amount of power that we currently export under existing generation facilities in the state. The...it is, and as John Hansen mentioned, it's tough to say build some more when you think you have enough already and you're selling some out of the system. The other advantages of the renewable power: its nature being clean; nonpolluting; very generous with its generation under its peak conditions. Our big advantage is that traditional fossil fuel or nuclear generation does not share, and part of that is due to something I think we all need more study of and more documentation of, and that is the equal or unequal application of incentives. For instance, I'm told that in the Powder River Basin, which is where we obtain our coal, not far away, we're at a better advantage in terms of transport costs than Georgia, for instance. But in that area, because of the nature of the beast, where a very small number of companies are in a position to mine that coal, mainly because of the capital costs and starting up costs where the trucks, for instance, that work those open mines are several times as large as this room, and that means that the

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cost of entering that market is pretty huge, it gives those companies an advantage. While they're mining on federal land, land managed by the Bureau of Land Management, some analyses indicate that the effective subsidy of those companies runs about a billion dollars a year when you compare what they pay versus what market value appears to be. So it's a warped specific situation there with the cost of entry into that field but, nonetheless, you know, we've got to make up that billion dollars somewhere, and that's a form of subsidy. And it's kind of complicated and I think we need more study on it, but I think, just allow me a little scope creep here, just because other forms of energy are not required to clean up their own mess and are allowed to pollute without penalty, then that is also another form of subsidy which is not faced by solar power,... [LB402]

SENATOR CARLSON: Okay, all right. [LB402]

MIKE ZAKRZEWSKI: ...if that gets to your question. If I can just add, in terms of the maintenance issue, if you'd allow me, the...I was surprised myself, going up on a roof, on a residence by Holmes Lake Park here in Lincoln last August to see if there was a problem. Those panels had been up for maybe a month and, gosh, there was dust, you know, the...not much rain to wash them off, which is a primary form of maintenance with solar panels. They just sit there, so you need some rain. But even with the dust and the bird leavings and leaves and so forth that naturally accumulated, they were still producing at or greater than predicted levels. So that's another issue to maintenance. [LB402]

SENATOR CARLSON: Okay. All right, thank you. Any further? Thank you for your testimony. [LB402]

MIKE ZAKRZEWSKI: Thank you. [LB402]

SENATOR CARLSON: Next. Welcome. [LB402]

TODD ADAMSON: Chairman Carlson, the rest of the committee, thank you for your time. My name is Todd Adamson, A-d-a-m-s-o-n, Cherry County rancher, fourth generation. We live about 65 miles from the grocery store. The kids drive 90 miles, round trip, to school, so we're about as rural as it gets in Nebraska. We, as has been stated before, high priority in my neck of the woods to keep our youth. We're very proud of the youth that we're developing up there, but we're losing them because of the lack of economic opportunities there, where we're at. We're looking at different things up there. One is a student-run grocery store my wife is involved with, different things to attract families to our town. We're looking at maybe bringing some kids from Omaha or Lincoln, Grand Island areas to go to school there, kind of an exchange student deal, get a rural Nebraska experience, and maybe attract some of those kids to our area. About three years ago, our county commissioners formed a committee, and I was one of the

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committee, and we were to do fact finding on wind energy development. We do not have coal. We do not have oil. We want to keep our water. Other than grass, wind is kind of our resource up there that we think we have a saleable product to export. Anyway, the one barrier was transmission, and then the tax incentives put us on a level playing field with other states. Since then, we've formed a wind association. We've got around 400,000 acres. There's huge interest in that area. We've run the numbers on some projects. The National Energy Renewable Lab out in Colorado ran some numbers for us. The numbers that came back are mind-boggling to me. It appears that this could have as much economic impact on our area since inception of the railroad. So we're very interested in wind energy development. This bill, along with others like it, anything to enhance that resource that we have, is a huge step, I think, in the name of economic development, which has been a key word in our area. And I guess those are the...I had a lot of comments that...I didn't write them down. I just came to visit with you. I usually forget about a lot of the things I'm going to say. But it is very much of interest. People are watching. People are excited. The youth that...our youth want to come back. My daughter is a freshman down here at the University of Nebraska. She's been down here a few months. She says, Dad, I like school and stuff, but I'm not a city girl, I want to come back. She wants to be a chiropractor. There's story after story. We've got a kid that just graduated, a neighbor, from back east at Yale, and they want to come back. I mean, we've got...we have good people. We need to keep them here in Nebraska. So this bill, I really think, is a huge step in the name of economic development in my area and for Nebraska. Thank you for your time. [LB402]

SENATOR CARLSON: Okay, all right, thank you. Senator Haar. [LB402]

SENATOR HAAR: Yeah, again, where are you from, sir? [LB402]

TODD ADAMSON: Our address is Cody, Nebraska,... [LB402]

SENATOR HAAR: Cody, okay. [LB402]

TODD ADAMSON: ...west of Valentine. [LB402]

SENATOR HAAR: I know where Cody is. [LB402]

TODD ADAMSON: Yes, not many people do. (Laughter) [LB402]

SENATOR HAAR: We've rented that little house there to go on the Niobrara River, so. [LB402]

TODD ADAMSON: Yes, sir. [LB402]

SENATOR HAAR: Yeah, great. Thanks. [LB402]

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SENATOR CARLSON: Other questions? You're a rancher. [LB402]

TODD ADAMSON: Yes, sir. [LB402]

SENATOR CARLSON: How are you doing with Eastern Red Cedar? [LB402]

TODD ADAMSON: We're trying to get them to grow where we're at, for shelterbelts. We don't have the problem they do in, like, the Broken Bow area. [LB402]

SENATOR CARLSON: So you're controlling them pretty well without a whole lot of effort. [LB402]

TODD ADAMSON: We're...we want to transplant them. Yeah, we're trying to get them to grow in our area. [LB402]

SENATOR CARLSON: And of course you live in an area where the Sandhills are a sponge and we don't need Eastern Red Cedars getting in the way of that water, so that it can go down to the aquifer. [LB402]

TODD ADAMSON: Right. [LB402]

SENATOR CARLSON: So keep up the good work. [LB402]

TODD ADAMSON: Yes, sir. [LB402]

SENATOR CARLSON: Okay. [LB402]

TODD ADAMSON: Yeah, thank you. [LB402]

SENATOR CARLSON: All right, thank you for your testimony. Next proponent. Let's go, let's go. How many more proponents do we have? Okay, let's be ready. Welcome. [LB402]

JON CRANE: Thank you. Good afternoon, Chairman Carlson and the committee. My name is Jon Crane, J-o-n C-r-a-n-e, and I am president of Boyd Jones Construction with a 89-year-old construction firm from Nebraska with offices in Omaha and Lincoln. I'm in support of the bill. And I do...I want to thank John Hansen, who I didn't know being from Omaha, but thank him for his vision, initiating the original C-BED, but as some people have stated, it's not working. We've only had one utility-sized project and so I think this amendment is really important. The amendment really does two things, and I may be reiterating, but it's really for export. We're a large state; we have few people, and we have a lot of wind. So we have, I've heard, anywhere in 6,000 megawatts in potential

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wind production in our state. That could be off by a thousand, it really doesn't matter. It's a multiple of what we use in our state. So we're never going to use the entire resource in this state. So what the C-BED bill really does, or is intended to do in the future, is to make wind development in our state competitive with the surrounding states, as was stated earlier by Adam Herink, where we have an automatic 5.5 percent disadvantage. And I think that's one of the reasons why there has been so little wind development in our state. As a general contractor, I've talked to developers and they tell me, and I don't like to hear this, but they say, hey the wind is as good in Kansas as it is in Nebraska, but it's cheaper to build in Kansas because they don't have sales tax, they have other incentives; and they're also, quite frankly, closer to the export...export markets in the southeast. And quite a bit of that work that has been done in Kansas recently is for export. The other really important, and I think part of this bill that makes it stand out from the other bills, and I think it's representative by the people you're seeing here. You're seeing a spectrum of Nebraskans who are in support of this bill. And this is a bill that was initiated by Nebraskans originally. And that's because the intent of this is also to create a wind industry and to keep some of the money in the state. Being a Nebraskan, I've seen many opportunities through the years where up front we were so focused on the lowest cost that we didn't make the investment in the future and the industry went elsewhere. I don't want to see that happen with the wind industry. I got involved with the wind industry in 2007. And the reason I did, quite frankly, was I missed out on the...as a general contractor on the ethanol boom. And by the time I did pursue that and actually even received a letter of intent for five plants that were never built. So there is a finite opportunity in these regards. So I've still kept that letter as a reminder. So in 2007, we started looking at getting into the wind industry and we started to talk to developers and to large contractors that are multinational or national in scope. And the developers would not take a risk on us and allow us to bid their projects because we had never done a wind farm. And the contractors would not allow us to bid on parts of their contract as soon as they heard we were a general contractor. In fact, in 2010 I was in the Rotunda here with a group that was going over to meet with the Governor to talk about LB1048 and a gentleman from a British company turned to me and he said, you're a general contractor aren't you? And I go, yes. And he smiled and he said, you'll never work for us. So...so anyway, that's the kind of hurdle that we face in trying to establish ourselves in this industry. And we were able to build one project in the state, but we had to take the unusual step of actually being the developer and owner as well. But I think if we can develop and own and construct a wind farm on our own, we should be capable of bidding on others. This bill would provide an incentive or for them to at least look at us. [LB402]

SENATOR CARLSON: Okay. All right. Thank you. [LB402]

JON CRANE: Thank you. [LB402]

SENATOR CARLSON: Any questions of Mr. Crane? All right, well, thank you for your

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testimony. Next testifier. Welcome. [LB402]

JOHN POLLACK: Hello. My name is John Pollack, J-o-h-n P-o-l-l-a-c-k. Originally I wasn't expecting to testify about this bill. I'm a meteorologist, I was a weather forecaster with the National Weather Service for over 30 years, now retired. And I heard some concerns expressed by Senator Smith and Senator Carlson that I thought I might be able to address to a certain degree. And one of these concerns was, you know, there are cost concerns. So, basically, about, well, if wind and solar are so good, why aren't they more successful now; and is this little subsidy going to really make that much difference? And the other is, well, what do we do about base load? The wind doesn't blow all the time and so forth. Since I'm a forecaster, by habit of mind, I like to look down the road in general. One of the things that I can tell you about wind and solar is that they tend to go together when it comes to addressing base load needs. There are a lot of times that the wind is blowing and there are times that you've got lots of solar energy. When you have a peak load situation, especially in rural Nebraska, you tend to have both. You tend to have an irrigation demand on the days when it's hot and there's a lot of wind. So you're addressing some of the base load concerns right there. When it comes to costs, looking down the road, what I think we're looking at is a smart grid where we are exporting wind and solar energy, it's being shuttled around the country. And in that case, my speciality would come into play because both solar and wind are substantially predictable, several days out. It's not like you...if you're a utility manager you get up in the morning and have to say, well, I wonder what the wind is going to be and how much energy there's going to be from our wind network. You can say the sun will be shining in this part of the country; we've got this capacity there. The wind is blowing at a certain amount in this part of the country. So in the context of being able to shuttle the energy around and export it, you're not in the situation where, yet, as John Hansen pointed out, will we even have enough capacity to worry about it. But when we get there, as you both stated your concerns, we're going to have the ability to have a system where we're working with other states in a regional or even national network to take the energy from where it's occurring and put it to where it's needed and on basis that is fairly predictable up to several days. Thank you. [LB402]

SENATOR CARLSON: Good. Thank you for your testimony. Any questions of the committee? Okay, thank you. Welcome. [LB402]

ROBERT STIENS: (Exhibit 7) Thank you. Good afternoon, Mr. Chairman and members of the committee. My name is Robert Stiens, S-t-i-e-n-s. I'm here today representing Edison Mission Energy, which has built and operates four wind projects here in Nebraska. Edison Mission Energy is an independent power producer with wind, natural gas, and coal plants throughout the country. We are one of the country's leading developers of wind projects with 31 projects in 11 states totaling nearly 2,000 megawatts. Edison Mission companies currently have four projects located here in Nebraska: in Custer, Knox, and Boone Counties. These projects deliver 280 megawatts



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of clean energy to customers of NPPD, OPPD, and Lincoln Electric. They represent an investment of nearly \$600 million that our company has made here in Nebraska and we pay...or will pay over the 25-year life of these projects approximately \$66 million in state and local taxes and pay our landowners \$42 million in lease payments. And our company does have the opportunity to develop more wind projects here in Nebraska. While Nebraska has been an excellent place to do business in, other states' tax incentives can put Nebraska at a disadvantage when it comes to attracting new wind projects. As you heard earlier, about 30 states offer some form of local property tax exemptions for renewable projects. Several states offer sales tax exemptions. Some states such as Oklahoma offer a state tax credit for wind production, their own version of the federal PTC. Later you will hear from Melissa Garcia from Custer County about the positive economic impacts these projects bring to the communities. I'll let Melissa talk about that. So in conclusion, I mean while Nebraska has done a good job attracting companies like Edison Mission to develop projects here, the key to a significant expansion of wind projects here in Nebraska is the ability to export wind to...export the electricity to other states. And here, as you've heard before, you're competing with the incentives I mentioned earlier, that some of your neighboring states offer. As you review the need for this bill, LB402, I urge you to take a look at the total economic benefit a relatively small decrease in one tax can bring to the state and local economy. As I mentioned earlier, Edison Mission has made a \$600 million investment in this state which has brought, and will continue to bring significant benefits to state and local governments, as well as supporting rural economic development. Thank you. Can I answer any questions? [LB402]

SENATOR CARLSON: All right. Thank you. Questions of Robert? Yes, Senator Haar. [LB402]

SENATOR HAAR: Yes, first of all can we get a copy of your talk. I'd like to have a... [LB402]

ROBERT STIENS: I need to...I can probably send it to you. I will...made several edits as we're going through, but I'm more than happy to get it to you. [LB402]

SENATOR HAAR: Okay. And I think we...we visited with you at Broken Bow. [LB402]

ROBERT STIENS: You did. [LB402]

SENATOR HAAR: Going to Broken Bow,... [LB402]

ROBERT STIENS: Right. [LB402]

SENATOR HAAR: ...that was something to see, yeah. [LB402]

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ROBERT STIENS: Yes, you did. You and a couple of the other members as well.  
[LB402]

SENATOR HAAR: Okay. Thank you. [LB402]

SENATOR CARLSON: Okay. Other questions? Well, I'll ask one because, as you know, we met at Broken Bow. [LB402]

ROBERT STIENS: Yes. [LB402]

SENATOR CARLSON: And you made a substantial investment in Custer County; and with the incentives that we don't have that other states do, why did you do it? [LB402]

ROBERT STIENS: Well, I think...we got...as I sort of looked at and analogized, we got the low-hanging fruit. We got...we were able to get PPAs with the OPPD, NPPD, Lincoln Electric. But as I mentioned, the future of the market is really in exporting power to other states. And, you know, if we had just built a project to...and sell, say, into Oklahoma or Kansas or somewhere else, I'm not sure we would make that same decision to build it here in Nebraska if it was solely for export. [LB402]

SENATOR CARLSON: You have possible plans of doubling what you've done in Custer County. Correct? [LB402]

ROBERT STIENS: Correct. [LB402]

SENATOR CARLSON: So if you get this exemption, how quick are you going to have that done? [LB402]

ROBERT STIENS: We're evaluating...we're evaluating that project in Broken Bow right now. [LB402]

SENATOR CARLSON: Okay. All right. Any other questions? Yes, Senator Dubas.  
[LB402]

SENATOR DUBAS: Thank you, Senator Carlson. So in regards to the incentives, what Nebraska has or doesn't have versus the rest of the state, if we pass LB402, does that move us up in the rankings considerably as far as helping us be more competitive with other states? [LB402]

ROBERT STIENS: Yes. It's one of the many factors that go into deciding where to locate a wind project such as the quality of the wind, access to transmission, landowners, a power purchase agreement. But it's something that definitely helps.  
[LB402]

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SENATOR DUBAS: So these are significant enough changes that it really will... [LB402]

ROBERT STIENS: I believe so. [LB402]

SENATOR DUBAS: ...come into play when you're making that evaluation. [LB402]

ROBERT STIENS: Yes. [LB402]

SENATOR DUBAS: Thank you. [LB402]

SENATOR CARLSON: Any other... [LB402]

ROBERT STIENS: (Exhibit 8) Good. And I'll leave, for record, The Wind Coalition, which is a trade group representing the wind projects, has a letter they'd like to put into the record as well. [LB402]

SENATOR CARLSON: Okay. Now Robert, I'm going to ask you one more question before you leave... [LB402]

ROBERT STIENS: Yes, sir. [LB402]

SENATOR CARLSON: ...because it's a follow-up what Senator Dubas said, and you said it will help. Now, if doing this is only that good, it will just help, I don't know whether we ought to do it or not. I think I need a stronger statement than that. How important is it? [LB402]

ROBERT STIENS: Well, I can...it is of the...several factors that go into deciding where we build a project. [LB402]

SENATOR CARLSON: Okay. All right. [LB402]

ROBERT STIENS: Okay. [LB402]

SENATOR CARLSON: Thank you. [LB402]

ROBERT STIENS: Um-hum. [LB402]

SENATOR CARLSON: Okay, any more proponents? Welcome. [LB402]

DAVID RICH: Welcome. Good afternoon, Chairman Carlson, members of the Natural Resources Committee. My name is David Rich, D-a-v-i-d R-i-c-h. I am the sustainable energy manager at the Nebraska Public Power District. I'm testifying in support of this

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bill on behalf of both NPPD and OPPD. NPPD and OPPD are supporters of wind energy development in Nebraska with both utilities having voluntary goals to serve the electrical needs of our customers with 10 percent renewable energy by 2020. Both utilities are well on our way towards that goal. During the past few months, NPPD and OPPD have worked with private wind developers to successfully add two more wind farms in Nebraska. OPPD recently approved a 200 megawatt wind energy agreement, and NPPD approved a 75 megawatt wind energy agreement. Both projects will benefit from the recently...the recent extension of the federal production tax credits. With these two, it brings the total wind farms in Nebraska to 15 with a total of 807 megawatts when they come on-line. However, since the original of the C-BED bill was passed in 2007, several developers have proposed C-BED projects with only one coming to fruition. The current legislation is not as effective as it could be and needs amending. We think passage of LB402 will increase the likelihood of success of developing rural community-based renewable energy projects. The state's public power utilities partner with the state Department of Economic Development and other local and regional economic development groups to help attract and expand business and industry in Nebraska. We believe this bill will make Nebraska more attractive for C-BED projects. Another thing we like about this bill is it involved more than just the owners of the renewable facility; it also gives opportunities and benefits to Nebraska-based contractors and suppliers. In summary, LB402 should help position rural areas of our state to attract future renewable generation projects and ultimately benefit Nebraska landowners, businesses and suppliers. We encourage the committee to advance this bill. I will be glad to answer any questions. [LB402]

SENATOR CARLSON: Okay, thank you, Dave. Questions from the committee? You live in Columbus, correct? [LB402]

DAVID RICH: Correct, yes. [LB402]

SENATOR CARLSON: Did you drive the electric vehicle here today? [LB402]

DAVID RICH: I do not have an electric vehicle. [LB402]

SENATOR CARLSON: Oh, okay. In Broken Bow that vehicle was there. [LB402]

DAVID RICH: We drove the hybrid vehicle out, the NPPD hybrid vehicle out there, yes. [LB402]

SENATOR CARLSON: Okay. All right. Okay, thank you for your testimony. Next proponent. How many more proponents do we have? One, two, three, four, five, okay. Welcome, Ken. [LB402]

KEN WINSTON: Good afternoon, Senator Carlson and members of the Natural

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Resources Committee. My name is Ken Winston, K-e-n W-i-n-s-t-o-n, appearing on behalf of the Nebraska Sierra Club. Will make a very brief statement because you've heard a lot of reasons why this bill is beneficial. Nebraska Sierra Club supports renewable energy development for the state of Nebraska. Among the reasons that we support renewable energy development, there are no emissions from renewable energy; it provides economic development opportunities for rural Nebraska; and they also do not use water. And LB402 provides a mechanism for increasing renewable energy development; and also provides a mechanism for keeping money in the state of Nebraska. For those reasons we support LB402. [LB402]

SENATOR CARLSON: All right. Thank you, Ken. [LB402]

KEN WINSTON: Thank you. [LB402]

SENATOR CARLSON: Questions? Senator Smith. [LB402]

SENATOR SMITH: Thank you, Senator... [LB402]

KEN WINSTON: I should have moved faster. [LB402]

SENATOR SMITH: You tried. [LB402]

KEN WINSTON: I tried, yes. [LB402]

SENATOR SMITH: Good to see you, Mr. Winston; thanks for your testimony. [LB402]

KEN WINSTON: Thank you, Senator. [LB402]

SENATOR SMITH: Say, are you satisfied that there are enough safeguards to take care of any costs that would occur as a result of any environmental cleanup or decommissioning costs or anything like that related to a renewable generation project? [LB402]

KEN WINSTON: Well, actually, one of the things that LB1048 required was a decommissioning plan for wind generation facilities. And so I'm...there are provisions in place to deal with that. [LB402]

SENATOR SMITH: So how does that work exactly, the decommissioning provisions? [LB402]

KEN WINSTON: Well, I did not draft those provisions. I believe that there is a couple of other people who will follow me who know those provisions better than I do. [LB402]

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SENATOR SMITH: Um-hum. [LB402]

KEN WINSTON: And I...I guess the reason I'm bringing it up is I'm aware that there are provisions for decommissioning and that they are part of the law that requires there to be a decommissioning plan in place as part of the wind development process. [LB402]

SENATOR SMITH: Okay. Who...who is that, do you know who that is filed with? [LB402]

KEN WINSTON: I'm not positive. I think it's with the Power Review Board, but I'm not positive. [LB402]

SENATOR SMITH: Okay. And then is it your understanding that any type of maintenance costs that are ongoing with these projects, is that simply between the landowner and the project owner? [LB402]

KEN WINSTON: Well, generally it's the obligation of the project owner. The maintenance is not part of the obligation of the landowner. [LB402]

SENATOR SMITH: And any subsequent cleaning and disposal of fluids that would result from any of those maintenance activities, you're satisfied that that's taken care of through those agreements? [LB402]

KEN WINSTON: Its...it's...well, I haven't seen one, to be honest. But I haven't heard of people complaining about it. I haven't heard anyone say that they felt it would...that they were inadequately or improperly dealt with. Most of the people seem to be pretty excited and happy to have wind projects on their property. And it's...and it's a voluntary agreement. They...they have...they get a chance to have the wind company put the project there and they get payments over the life of the facility. [LB402]

SENATOR SMITH: But you're comfortable that any cleanup or remediation is satisfactory? [LB402]

KEN WINSTON: Well, to my knowledge, as I said, there are provisions, and I think, actually, I would think that those provisions regarding remediation might be examples that could be used in other areas of law as well. [LB402]

SENATOR SMITH: Okay. Thank you. [LB402]

SENATOR CARLSON: Okay. Any other questions? Thank you. [LB402]

KEN WINSTON: Thank you. [LB402]

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SENATOR CARLSON: Okay, next. Welcome, Andy. [LB402]

ANDY POLLOCK: Thank you, Chairman Carlson, members of the Natural Resources Committee. My name is Andy Pollock, A-n-d-y, Pollock is P-o-l-l-o-c-k. I'm here as registered lobbyist on behalf of the Nebraska Export Association which represents landowner interests across the state. We've been involved since the early days of some of the big changes in LB1048. I would like to thank Senator Mello for introducing LB402. I think it's a very complete bill. I understand there is a couple of bills pending in Revenue too. I think this is a really good bill in many respects and I think I can simply summarize that by pointing out to you what you've already seen, and that is the diversity of the people who have testified on this bill. You've seen instate developers; you've seen out-of-state developers; you've seen landowners; you've seen public power; it's...and you've seen environmental groups. It's not very often that this legislative body gets that diverse of a crowd speaking in unison on a bill like this which is a very, very important step. This is one of those obstacles that remains to dynamic wind development in Nebraska and something needs to be done. And this is a good way of doing it. Landowners, which we primarily speak on behalf of, stand to see some significant economic gains by wind development in Nebraska, all across the state, especially in rural areas where they need economic develop. I've worked extensively with a couple of county groups and one is out in Banner County, which is a county that is desperate for a breath of fresh air. And this bill would help them get a step closer to that. With that I would be glad to answer any questions. And Senator Smith, I've spent a lot of time looking at agreements, both for developers and for landowners. If you've got any questions about those maintenance and cleanup, I'd be glad to try to address those. [LB402]

SENATOR CARLSON: Okay. Questions? Senator Smith. [LB402]

SENATOR SMITH: Thank you, Senator Carlson. Since you offered, but be fairly short in, you know... [LB402]

ANDY POLLOCK: Sure. [LB402]

SENATOR SMITH: ...give me just an example of how that is structured. [LB402]

ANDY POLLOCK: Well, I would say that the agreements have evolved and become much better in the past few years for wind development projects, and they're much more landowner friendly. I think you see the developers are recognizing the value of being good stewards and neighbors, if you will, with those landowners. And they speak extensively and with great detail to how they will clean up the project, both after construction of the project in terms of returning pasture and cropland to a state where it can be utilized and used for production again. That means loosening the soil. So there's the post-construction work, that applies to any maintenance that happens throughout

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the lifetime of the farm too. And then there are substantial protections both in contract and state law. And I think Senator Dubas had a bill a few years ago which beefed up the decommissioning requirements for developers too. That's in law right now. But the contracts generally require that they...the developer return it to as close of the natural state that it was preexisting the farm, including digging out support structures down to a level of four feet, I think is generally the norm. [LB402]

SENATOR SMITH: Typically is there any reference in those agreements to fluids or materials that are used in ongoing maintenance? Again, talking about cleaning, anything of that... [LB402]

ANDY POLLOCK: I know I have seen in some of the agreements, but not all of the agreements that I've looked at, that there are in terms of hazardous liquids, not all liquids, but those that would be hazardous. I think it goes both ways. There's assurances by the landowner if he or she knows that there are no hazardous materials on the site at the time that construction begins and that at the end of the deal that those types of materials are removed as well. [LB402]

SENATOR SMITH: So, for the most part, it's an individual agreement between the property owner and the operator, and then between the operator and any contractor they may use to provide those services. But there's no... [LB402]

ANDY POLLOCK: Correct. [LB402]

SENATOR SMITH: ...oversight of materials or fluids or anything like that? [LB402]

ANDY POLLOCK: Oversight by some state regulatory body? [LB402]

SENATOR SMITH: Right. [LB402]

ANDY POLLOCK: That would be correct. [LB402]

SENATOR SMITH: Okay. [LB402]

ANDY POLLOCK: As far as I understand it. [LB402]

SENATOR SMITH: Okay. [LB402]

ANDY POLLOCK: DEQ may have some rule over all hazardous waste materials, but that's beyond what I know for purposes of this here. [LB402]

SENATOR SMITH: Do you, if that...do other states do anything? [LB402]



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ANDY POLLOCK: No, I could find out if you'd like me to. [LB402]

SENATOR SMITH: Yeah, that would be helpful. [LB402]

ANDY POLLOCK: Okay. [LB402]

SENATOR SMITH: Thank you very much, appreciate it. [LB402]

ANDY POLLOCK: You're welcome. [LB402]

SENATOR CARLSON: Senator Dubas. [LB402]

SENATOR DUBAS: Thank you, Senator Carlson. Thank you, Mr. Pollock. As I was looking through some of this information that John Hansen gave us, and where...how far states are as far as the percentage of power that they get from wind. And I think the most recent stat that I saw in there for Nebraska was 1.2; we probably climbed up a little bit, but not a lot. Then I look at South Dakota that's over 20 percent, Iowa is at 18 percent at least; many of the other states surrounding us are at 10 percent or very close. Okay, so what we're doing...trying to do with this bill is to level the playing field, to try to get more wind development. Are we always going to be playing catchup with these states? I mean, there's some legitimate reasons why we're behind because we're public power, we have to deal with thing differently, but, I mean, I see how far ahead these states are ahead of us. Is what we're doing enough, I guess is what I'm asking you? And that's probably more of an opinion question than anything else, but, you know, you work with landowners and you've worked with this issue so I'd just be interested in your perspective. [LB402]

ANDY POLLOCK: Yeah, and I'm not a...I'm not an economist, and...or a prophet. I would say that this bill goes a long way in removing another barrier. I think a lot of regulatory barriers, all, perhaps not, but a lot of regulatory barriers were taken down by LB1048. This needs to be...this needs to be changed to the sales tax. It's been prohibitive. If we looked at what's happening in Kansas and Colorado recently, they're just eating our lunch. And we'll continue to fall further behind without a bill like this. I'm convinced of that. Will we ever catch up? I don't have a good answer to that. I think this helps us position ourselves to do that, but there's also, of course, other factors as well. We've got great wind. We've got better wind than most of those other states and I think that alone is a reason why we might be able to catch up, if there is that possibility. [LB402]

SENATOR DUBAS: But if we don't do this, there's...that just...that just keeps us behind. [LB402]

ANDY POLLOCK: I think the proof is in the pudding. If you look to our neighbor to the

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south and what's happened there recently and this, as far as I can tell, the wind is better here, like Mr. Crane mentioned earlier, and this appears to be the only reason...or the main reason holding us back. I would say that on LB1048 I think there's some issues that this body needs to address, maybe not this session, but you've got a PPA requirement that I think has caused issues; you've got restrictions on who can build export transmission, I've talked about that in another setting here that I think creates issues. But those are issues beyond the scope of this bill. [LB402]

SENATOR DUBAS: Very good; thank you for your testimony. [LB402]

ANDY POLLOCK: Thank you. [LB402]

SENATOR CARLSON: Thank you. Senator Haar. [LB402]

SENATOR HAAR: Thank you. Andy, wouldn't you say that this is a little bit...to address Senator Smith's question, that with wind, I've seen a lot of organizations that hire lawyers and you don't just have people working on their own, generally, to deal with companies. Hasn't that been an advantage in the development of the wind industry? [LB402]

ANDY POLLOCK: You mean the developer hiring local people or I'm sorry... [LB402]

SENATOR HAAR: No, that the landowners... [LB402]

ANDY POLLOCK: Oh. [LB402]

SENATOR HAAR: ...or organizations and they hire lawyers and experts and so on. [LB402]

ANDY POLLOCK: I see. I'm sorry, I misunderstood your question. No, I mean it's been...that's certainly been the case throughout the state. If we see more dynamic development, that's...there's economies of scale there, it will...it will improve that too. It will have trickling effects to various sectors. And I think, frankly, and I think there's been testimony before, that the greatest opportunity beyond what the landowner might experience is just to build and create a manufacturing...or a reason to have a good manufacturing industry for wind generation components in the state. I think if we allow wind to be developed, that industry is going to come here. We're in a prime spot being in the center of the state with good roads and good railroads and there's opportunities there that we're missing out on right now. [LB402]

SENATOR HAAR: Um-hum. So it's not just the sales tax from the wind and the property and so on, but the fact that this brings manufacturing as well. [LB402]

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ANDY POLLOCK: This brings manufacturing; and this bill, on this bill alone, would encourage use of Nebraska people and products and supplies to build wind farms. [LB402]

SENATOR CARLSON: Okay. Other questions? Okay, Andy, thank you for your testimony. [LB402]

ANDY POLLOCK: Thank you very much. [LB402]

SENATOR CARLSON: Next. Welcome. [LB402]

KAY CARNE: Welcome. Thank you for hearing my testimony today. My name is Kay Carne, C-a-r-n-e. I'm here as a mother and a young person of Nebraska who left the state for college, worked on both coasts, and has come back because Nebraska is a great place to live. One of the most disappointing things is that we have such an incredible wind resource. I know we're fourth in the country, but when I look at what is being produced here, it's disappointing that we don't have the proper incentives in place. And I think that this is an important step in the right direction. So, just wanted to let you know that there are more than companies and farmers who will benefit. The typical mother and citizen is concerned about this issue. Any questions? [LB402]

SENATOR CARLSON: Okay. Thank you for your testimony. Questions? Okay, thanks for being patient and sharing that with us. [LB402]

KAY CARNE: All right. Thanks for listening. [LB402]

SENATOR CARLSON: Welcome. [LB402]

DARREL HAYEK: Welcome, Senators. My name is Darrel Hayek, I represent Saline County Wind Association. I can tell you there is private transmission lines going into Kansas. We were trying to bid to get on those. And because of the sales tax, the developers decided that we were not cost effective. Getting rid of this will give us a leg up on trying to move ahead with wind. [LB402]

SENATOR CARLSON: Okay. All right. Thank you. Questions? So you have first hand where you felt that you were in a good position to have a project and it ends up, and you think the backbreaker was the lack of the sales tax exemption? [LB402]

DARREL HAYEK: They told us that. We've had...we have better wind than where they're going. [LB402]

SENATOR CARLSON: Okay. Okay. Everything but that then. [LB402]

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DARREL HAYEK: Yes. [LB402]

SENATOR CARLSON: Okay. Thank you for your testimony. David, welcome. [LB402]

DAVID LEVY: Thank you, Senator Carlson. Chairman Carlson, members of the committee, David Levy, L-e-v-y, attorney with Baird Holm Law Firm and registered lobbyist for Bluestem LLC, and Edison Mission and Midwest Wind Energy. You've heard a lot of, I think, very good testimony today, and I will not repeat that, I promise. I did want to come up and testify, though, for two reasons. One, Senator Smith, I want to try and address some of your questions about decommissioning and environmental issues. But I wanted to, before I do that, make one...two quick points. Wind accounted for over three-quarters of the new electric generating capacity installed in the United States in January of 2013. Over three-quarters of the new installed generation in this country in January was made up of wind. A year ago that place was held by coal. Coal is not going away; wind is not going to take its place. But wind is a major player in the electric industry in this country, there's no question about that. And going forward, other renewable sources will be as well. We do not want to see Nebraska be left behind or be left out of this. It's a one-time opportunity; it's a finite opportunity. And as you've heard about it first hand today, we are missing out on it. LB402 also, I think, has a tremendous benefit in that not only does it incentivize wind, but it incentivizes the location of the manufacturing industries, the services, the support industries here, which create jobs. And it's another form of export. If you have a factory here making blades, they're not just going to sell those blades to Nebraska companies, they'll sell them to Kansas, etcetera. Mr. Pollock talked about Colorado, Kansas, and Iowa, I think as he put it very well, eating our lunch as to wind development. They are eating our dinner, if you will pardon the bad continuation of the metaphor, when it comes to manufacturing. There are factories in Colorado, Kansas, and Iowa where they make significant components of wind turbines, and the cells, blades, towers, etcetera. On that note, I also want to note, and Senator Carlson, I apologize if you mentioned this at the beginning, the committee received, via the clerk, I think an excellent e-mail this morning from Tony Raimondo, Jr. who is affiliated with Behlen Manufacturing and Distefano Manufacturing, companies that are already manufacturing wind turbine parts in the state. They support this, they want to expand that aspect of their business and they see this as a way to help them get the foot in the door. As to decommissioning and environmental issues, Mr. Pollock is correct that LB1048 put in place a statewide, if you will, decommissioning requirement for export projects. Most counties, I believe every county where I've worked on a wind project, and it probably numbers maybe ten or so at this point, has a county ordinance where they require submission of a decommissioning plan prepared by a registered engineer and also submission of decommissioning security, a bond or letter of credit, so that if the developer is not there at the time of decommissioning there will be money there to pay for the decommissioning. In terms of environmental spills and things like that, wind farms have to comply with all state and federal environmental laws, just like anything else. And all of the wind energy leases that I've worked on have also

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environmental indemnity-type of provisions in them where any damage done to the property, whether it be from spills of hazardous materials, from trucks driving through crops, from fences being left open, gates being left open, fences being destroyed, any of that...those things, those issues, fall at the responsibility of the wind energy developer or the owner and operator at that time to take care of. So those things don't fall on the landowner. And anything that would trigger state and federal environmental law for any other reason would do that for a wind project as well. [LB402]

SENATOR CARLSON: Okay. Thank you. Any questions? Thank you, Dave, for your testimony. [LB402]

DAVID LEVY: All right. Thank you all very much. [LB402]

SENATOR CARLSON: (Exhibits 9, 10, 11, and 12) Any further proponents? We have letters to be read into the record in support of LB402 from Ryan Beckman, Olsson Associates; from Kevin Connot, Advantage Consulting Group; from Tony Raimondo, Jr., Behlen Manufacturing Company; from Ross Knott of Petersburg State Bank. Do we have anybody in the...as opponents, testifying as opponents? All right, anybody in a neutral position? Okay. Do we have any others in a neutral position? Okay. Welcome. [LB402]

MELISSA GARCIA: Welcome. Thank you, Chairman Carlson and committee. My name is Melissa Garcia, G-a-r-c-i-a, and I'm the president of Custer Economic Development Corporation, representing that group. Their bylaws prohibit me from taking a stand. But with that, I represent the community of Broken Bow and the surrounding area. As you've heard, last year phase one of a two-phase wind project representing 80 megawatts complete was constructed and became operational last year. Because of the benefit of that, I'd like to share with you some key economic development indicators. Tied to that project, and I do that because I believe that we're just one of the progressive rural Nebraska communities and these numbers could be fair indicators for other communities who are exploring other wind projects of that magnitude. These numbers are based on our own business retention and expansion surveys. The department...Nebraska Department of Revenue's Nonmotor Vehicle Taxable Sales Report for April 2011-12, and a study created to estimate the impacts of a model business operated in our area. During the construction of the wind farm, we can estimate that over \$8 million of indirect and induced revenue was created. This addition allowed for an estimated \$2.5 million in indirect and induced labor compensation. Custer County saw an increase of 6.4 percent in the nonmotor vehicle taxable sales. During that year the city of Broken Bow had over \$2 million more in net taxable sales than any other comparable Nebraska community. Custer County's lodging tax brought in record-breaking numbers high above our historical average. And that money, of course, goes back to the area in the form of tourism promotion and development. We believe these indicators also encourage business growth. During construction, 18 businesses

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expanded, investing over \$13 million. Another 18 businesses opened their door for the first time. And finally, our retail pull factor was 84 percent above the state average and that clocks in at the same as the community of Kearney. Again, I share these numbers with you merely as I reflect...I think they reflect the possible economic impact of future wind projects in Nebraska. Thank you for your time and consideration and I'd be happy to answer any questions. [LB402]

SENATOR CARLSON: Thank you very much. How is your testimony neutral?  
(Laughter) [LB402]

MELISSA GARCIA: Because I started out saying...(Laughter) [LB402]

SENATOR CARLSON: Senator Dubas. [LB402]

SENATOR DUBAS: Thank you, Senator Carlson. I would think it's neutral because you just gave us facts and figures about your project. [LB402]

MELISSA GARCIA: That's right. Thank you. [LB402]

SENATOR DUBAS: You didn't reference the bill, but just trying to help you out there.  
[LB402]

MELISSA GARCIA: Thanks. [LB402]

SENATOR DUBAS: But I think the facts and figures you presented are pretty phenomenal. And if you could provide those for the committee, I was trying to write them down as you were saying them, like okay, I can't keep up. [LB402]

MELISSA GARCIA: Absolutely. [LB402]

SENATOR DUBAS: If you could provide those, I'd really appreciate it. [LB402]

MELISSA GARCIA: Absolutely. [LB402]

SENATOR DUBAS: Thank you. [LB402]

SENATOR CARLSON: Any other questions? Senator Haar. [LB402]

SENATOR HAAR: That took care of it. I had one, but Annette's question took care of it.  
[LB402]

SENATOR CARLSON: She answered it? [LB402]

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SENATOR HAAR: Yes. [LB402]

SENATOR CARLSON: She asked it? [LB402]

SENATOR HAAR: Yes. [LB402]

SENATOR CARLSON: All right. Any further questions? Well, and I recall being in Broken Bow and something that I said and I'm going to repeat it because I think it's really important for what you've done as a community. You didn't sit back and hope for something and wait for something and expect something and think you're entitled to anything, you earned it. And so you're benefitting from the efforts that you put forth. And I really commend you for that in your community. [LB402]

MELISSA GARCIA: Well, thank you. And I appreciate that. That's just echoing what I love to say. Our community supports itself; they're progressive; they're focused on the future and this project is an example of that. Thank you. [LB402]

SENATOR CARLSON: Good. Okay, thank you for your testimony. Thank you for coming. Anyone else in a neutral position? Senator Mello, you're recognized. [LB402]

SENATOR MELLO: Briefly, I understand...thank you, Chairman Carlson and members of the committee. I know you have another bill afterwards and it's been a lengthy hearing. To leave you with anything, first off, I think the testimony was mentioned, I believe, by an earlier testifier that LB402 brought a very diverse coalition of supporters from, obviously, in-state, out-of-state developers, landowners, as well as a variety of organizations that worked on the original C-BED legislation and seized the importance for rural economic development. A component, obviously, and it's something I mentioned in my opening, as well as Senator Smith asked a question, I fully intend to follow up with Chairman Carlson and other members of the committee after we get more information back from the Nebraska Energy Office in regards to the fiscal note. I understand it's always an issue with every committee, with every piece of legislation. But as I mentioned earlier, we fully anticipate receiving information that will help, at least, provide some more guidance, I believe not only to us, but also the Fiscal Office in regards to how this...the origin of this fiscal note started in regards to what projects were utilized in the sense of what they thought would be C-BED projects' comparison to maybe other projects that I know other bills are trying to incorporate in their legislation. So, with that, obviously, I'd urge the committee to strongly consider moving LB402 out of the committee into General File. And with that I'd be happy to answer any questions you may have. [LB402]

SENATOR CARLSON: Okay. Thank you, Senator Mello. Any questions of the committee? [LB402]

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SENATOR SMITH: Yes, Senator Carlson. [LB402]

SENATOR CARLSON: Yes, Senator Smith. [LB402]

SENATOR SMITH: Thank you, Senator Carlson. And, Senator Mello, thanks for coming in and introducing the bill and coming back to close. And there are a couple of questions I asked along the way. You know, California has...is beginning to have troubles. They are becoming so heavily dependent upon renewables that on their base load generation they're having problems there meeting those demands. And don't have any problems with the renewables. I think, this legislation is a good piece of legislation, but I'm concerned about going forward, the role of adding base load generation. Do you see down the road this same type of legislation being available to encourage the private development to provide base load generation as well or do you see it only limited to renewables? What...I mean...kind of looking out probably beyond while I'm here, beyond.... [LB402]

SENATOR MELLO: Beyond our life...beyond both of our lifetimes possibly? [LB402]

SENATOR SMITH: No, it's not...no, it's not going to be beyond your lifetime, Senator. Maybe beyond mine, but not beyond yours. [LB402]

SENATOR MELLO: I think...well...quite possibly, I think it could be beyond my lifetime, but I think it...the reality is, and I think...I think Mr. Levy provided a good perspective that by no means is LB402 going to, ultimately, replace all of the other aspects of Nebraska Public Power or Omaha Public Power Districts or any of the other local public power districts' power generation. It's an opportunity for us to be able to, I think, expand on a very unique circumstance that Nebraska is in in regards to a potential for development. And I think an argument that I have made multiple times that if Nebraska is in positions of potential development on a variety of potential energy sources I would have a feeling that this committee and this Legislature would take that under consideration the same way it would take under consideration wind energy or solar energy or any other kind of renewable energy development. So that position doesn't really change in my mind. The uniqueness, though, is that Nebraska does rank fourth in wind energy potential and that's why, ultimately, I brought LB402 and I know other senators have brought wind energy legislation in the past, not to, I think, replace or completely try to replace one energy source or another, but, ultimately, to try to provide what we see as, I think, a growing balance of the options that are available for Nebraska as a state, and public power in regards to future generation potentials and utilizing that potential and variety of rural economic development opportunities. [LB402]

SENATOR SMITH: Great response. Thank you. [LB402]

SENATOR CARLSON: Okay. Any further questions? Seeing none, thank you, Senator



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Mello. [LB402]

SENATOR MELLO: Thank you, Chairman. [LB402]

SENATOR CARLSON: And with that, we'll close the hearing on LB402. Thank you for coming. And we're going to take about a seven-minute break and we'll start on LB567 at 25 minutes to 4:00. [LB402]

BREAK

SENATOR CARLSON: Pretty quickly here, when we're ready to go, we'll start our hearing. Okay. We will open the hearing on LB567. And, Senator Haar, you're recognized. [LB567]

SENATOR HAAR: (Exhibit 13) Thank you very much, Chairman Carlson and members of the committee. Several months ago I met with...separately with LES, with OPPD, and NPPD about LB567 and so I understand they will come in opposing the bill today. But we've decided we're going to talk this summer and that this will be the opening of a discussion. With that, because of the symbols I brought with me, I'd better take a minute to explain. The button I'm wearing says Reagan, Ronald Reagan and Ken Haar. That's because I introduced a bill today for home births by certified nurse midwives, and both Ronald Reagan and I were born at home. (Laughter) The flower also comes from that group. And then I have an announcement. I brought the elephant with me. The announcement is I'm not changing parties soon. (Child crying) (Laughter) Very good. But this elephant is my prop. Well, once upon a time, there lived in a village in India six blind men, and one day the circus came to town and the men, having been blind their whole lives, they went to see the elephant. And I think you know the rest of the story. One said the elephant is like a pillar. Another said, who touched the tail, said, no, the elephant is like a rope. And another touched the ear and said, no, the elephant is like a big fan. And then one touched the tusk of the elephant and said, no, an elephant is like a solid pipe. Well, that story...I try to sort of visualize things, is where I'm going with my bill--LB567. And what we're doing today is to make the case for including externalities in public power statutory directives. Now externalities, according to the business directory, are factors which benefit, called economies, and costs, called external diseconomies, are not reflected in the market price of goods and services. Externalities are a loss or a gain in the welfare of one party resulting from an activity of another party without there being any compensation for the losing party. Externalities are an important consideration in cost-benefit analysis. So...and I'll get to the rest of this handout in my closing, but LB567 requires the Nebraska Public Power Review Board to consider the following additional, or externalities, when approving power generation: the health costs, economic development potential, the effects of water usage, risk analysis on the life cycle costs of generation, and finally the economic impact of obtaining fuels outside the state of Nebraska. And we brought in testifiers and they will sort of be appearing in that

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order. So with that, I'm going to get out of the way. I'll leave my elephant here and we'll let the testimony begin, unless you have questions for me to start with. [LB567]

SENATOR CARLSON: Okay. Thank you, Senator Haar. Questions? [LB567]

SENATOR SMITH: Yes. [LB567]

SENATOR CARLSON: Senator Smith. [LB567]

SENATOR SMITH: Thank you, Senator Carlson. Senator Haar, I just wanted to engage a little bit here and kind of understand the intent of the legislation you have here. And if I understand, and please correct me if I'm wrong, you're wanting the Power Review Board to make determination on generation based on health, environmental impacts, economic impacts, and such. Is that in a nutshell what you're looking to do? [LB567]

SENATOR HAAR: That's right. In addition to the two existing, which are low cost, dependable. [LB567]

SENATOR SMITH: Low cost? [LB567]

SENATOR HAAR: So these are the additional factors. [LB567]

SENATOR SMITH: Okay. So...and would any type of generation be excluded from this... [LB567]

SENATOR HAAR: No. [LB567]

SENATOR SMITH: ...intent? [LB567]

SENATOR HAAR: No. But really the parameter for this is that those kinds of projects which have to be reviewed by the Power Review Board. So if it came to somebody's solar panels on the roof, obviously, that doesn't fall within the purview of the Power Review Board. But if, let's say, Gerald Gentleman were going to be upgraded, that would be included, or if a new...a brand new facility of any kind, even a large solar facility and so on, anything the Power Review Board has to review would fall under this. [LB567]

SENATOR SMITH: All right. So with the previous bill, we were talking a bit about contracts that exist between landowners and producers, and how would that factor into this as well? Because I was a bit surprised when Mr. Winston was testifying. He didn't seem very concerned about contamination that is part of wind generation... [LB567]

SENATOR HAAR: Uh-huh. [LB567]

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SENATOR SMITH: ...as much as perhaps he's expressed a concern in the past on contamination related to fossil fuel production. And he was touting the economic benefits, and I know that's something we want very much. [LB567]

SENATOR HAAR: Uh-huh. [LB567]

SENATOR SMITH: So how would we factor in those hidden...potential hidden contamination that would occur from some of these generation projects that may not be available to the Power Review Board? [LB567]

SENATOR HAAR: No, that's a good point. And as I said, this is a beginning of a discussion and we will include your concerns as well. [LB567]

SENATOR SMITH: So you don't...beginning of discussion. So are you thinking that this might end up being an interim discussion? [LB567]

SENATOR HAAR: Yes, and I guess I should have said that. [LB567]

SENATOR SMITH: And not a bill going forward to the floor. [LB567]

SENATOR HAAR: Yes. Yeah. Well, it's a bill but I'm not going to push to get it out of committee this year but...and it will probably turn into a study this summer. [LB567]

SENATOR SMITH: Okay. [LB567]

SENATOR HAAR: And so, like I said, one of the purposes of these hearings is to say, gee, I didn't think of that. And I appreciate your concern. [LB567]

SENATOR SMITH: Okay. And I want to be clear as well that one of the gentlemen from NPPD came up to me afterwards and there was a little discussion about cleaning turbines, and you're the renewable expert, I'm not, so you probably know all about this stuff. But he mentioned that probably in this region it's not as critical to clean the blades, but there is other things that go along with maintenance of these generators. And I know this is a concern to you going forward. There's a lot of wind generation proposed for Nebraska and I just want to bring to your attention, like in gearbox maintenance,... [LB567]

SENATOR HAAR: You bet. [LB567]

SENATOR SMITH: ...there's use of flammable brake and choke cleaner for both shop and field maintenance, repair, and overhaul. And even in the brake and choke cleaner, I mean it goes on to talk about chemicals used that are methanol, isopropyl alcohol.

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You're a chemist so you probably know some of those things, right? And by the way, those two items are used in fracking. [LB567]

SENATOR HAAR: I understand. [LB567]

SENATOR SMITH: Benzene, xylene, it goes on and on and on, but there's nowhere in statute do we appear to be addressing the health consequences of having some of these fluids... [LB567]

SENATOR HAAR: Uh-huh. [LB567]

SENATOR SMITH: ...disposed of at the generator site for wind generation. So I'm interested to hear where this goes and I'm looking forward to hearing some of the testimony. But I would like to also have a commitment maybe going forward how we're going to bring wind generation into the fold, if you would, in making certain that it is operated in an environmentally friendly way. [LB567]

SENATOR HAAR: You bet, and there are other considerations, I think, already in LB1048. For example, with wind turbines you think about bird migrations,... [LB567]

SENATOR SMITH: Uh-huh. [LB567]

SENATOR HAAR: ...bats, and all those kinds of things. [LB567]

SENATOR SMITH: But it seems as if this point is being given a pass and I think we need to address it. [LB567]

SENATOR HAAR: We'll include it. We'll include it. Thank you. [LB567]

SENATOR SMITH: Thank you. [LB567]

SENATOR HAAR: Uh-huh. [LB567]

SENATOR CARLSON: Okay. Any other questions? Okay. Thank you, Senator Haar. Now we're ready for proponents. Would you like to go first? [LB567]

NANCY PACKARD: This the first time I'm... [LB567]

SENATOR CARLSON: You were doing such a good job there, I think you can talk at the same time. [LB567]

NANCY PACKARD: This is...she must have known it was important because I thought we were going to be talking an hour or two ago. This is the first time I've taken her out.

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I've watched her for some time, so I think this is a really important issue. I'm Nancy Packard, P-a-c-k-a-r-d, from Lincoln, Nebraska. I was a teacher in Hastings for most of my adult life and I grew up on a farm in York County where, at 16, I drove 70 miles an hour on the gravel roads,. And then when I was a young adult, I smoked. And those are among the things that I don't do now because I understand the repercussions of my actions. And I think that this bill is so important because it addresses the repercussions of energy. This little girl has got an older brother who's seven, and when her mama was pregnant, she wasn't eating fish or very much fish. She was real cautious because of mercury, which is pretty much caused by our coal-fired plants. That's...I think that's still alleged to be the cause of mercury contamination. I'm concerned about asthma, other health problems that have to do with the...whatever the materials are that are spewed out of coal-fired plants in particular, while also appreciating the concern that whatever we add is healthy. But particularly, I'm concerned about global warming, about climate change. I have had the advantage of paying attention to that topic for a long time so I was prepared to recognize it and accept it before it became mainstream, which I think this year kind of it has. You see it in the newspaper. Until the last couple years, it was pretty much...it was pretty much ridiculed. Last summer was scary for me in my garden. It was hot and it was dry, and you know what I'm talking about. And that is what makes me ready to address all the measures we can take to put a halt to that. We're living in Nebraska, which ever since that fiscal crisis of 2008, we've been proud to say that Nebraska has not been affected like most of the other states of the United States have been. We also are proud to say that we have public power and if those two things are true, and they are, then we need to go out on a limb and really push forward on the renewables. We need to be part of the future. We can afford it. It's hard, but we can afford it now when other states perhaps can't. And I guess I'm putting my money where my mouth is. The money I don't have yet. Tomorrow I'm going to get a loan because I'm putting some solar panels on my roof. I'm 68, and by the time I'm 80, I intend to be driving an electric car powered by my own solar panels and with powering my own house that way. So I'm trying to practice what I am asking you to do. Thank you. [LB567]

SENATOR CARLSON: All right. Thank you for your testimony. Any questions? Well, you've got a very well-behaved one there. (Laughter) Thank you for coming. How many proponents do we have? Okay, we've got the lights, so come on forward. [LB567]

CLINT ROWE: Good afternoon, Chairman Carlson, members of the committee. My name is Clint Rowe, R-o-w-e, and I'm a practicing atmospheric scientist. I've been, for over 35 years, studying and researching the climate system and I'm currently a professor at the University of Nebraska in the Department of Earth and Atmospheric Sciences. Humankind has been adding increasing amounts of carbon dioxide and other greenhouse gases primarily through the combustion of fossil fuels since the beginning of the industrial revolution. This has led to a sharp increase in the atmospheric concentration of these gases over the past 150 years. This is an established fact, based

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on records of fossil fuel use and direct observation of the atmospheric concentration of carbon dioxide. The direct consequence of this, in the absence of any other influences on the climate system, would be an increase in the average global temperature of the atmosphere. This is established, uncontroversial science that has been understood for well over a century. Our knowledge of other influences, such as albedo changes due to land use alterations, the effects of aerosols, and cloud feedbacks, while less certain, is sufficiently robust that we know that their net effect would not offset the direct warming that the increased greenhouse gases would bring and could likely lead to greater warming. While the earth's temperature naturally varies over many time scales, from daily to millennia, the observed increase in global temperatures since the late nineteenth century cannot be attributed to natural variability. The period of greatest warming in historical record coincides with the time during which humans have increased the concentration of greenhouse gases in the atmosphere. Moreover, the pattern of temperature changes in the atmosphere, warming of the lowest layers and cooling in the layer above, can be explained by greenhouse...increased greenhouse gases but is not consistent with other postulated causes, for example, solar variations. Moreover, there's been no detectable trend in solar output sufficient to cause the observed increase in earth's temperature. Otherwise, spread changes in the climate system, such as decreases in snow cover, sea ice, glaciers and icecaps, milder and less frequent cold spells, warmer and more frequent hot days and nights, earlier greening and blooming of flowering plants, and rising sea level are consistent with a warming world. Climate models, one of the primary scientific tools used to assess natural and human-induced changes to the climate system both in the past and projected for the future, include the primary processes and feedbacks that affects the earth's climate. Only simulations that include the increases in greenhouse gases attributed to human activities are able to properly represent the increased global temperature observed in recent decades. All these models project increasing global temperature through at least the end the twenty-first century, even if greenhouse gas emissions immediately ceased. The high standards of science require that our findings be repeatable and verifiable by other scientists. Correct results are corroborated; incorrect results are discarded. Self-declared experts who are not trained in climate science, who do not follow standard scientific methods of research and publication, are not producing scientifically valid results but are merely making unjustifiable claims. The basic findings of human-induced climate change have been reviewed and confirmed by the leading professional scientific societies and natural academies of science, both in the United States and around the world. To paraphrase Richard Somerville, distinguished emeritus professor of climate science at the Scripps Institution of Oceanography, who contrasted the response of climate change deniers to the usual response to medical advice: If your doctor tells you that you need to lose weight and get more exercise, you don't complain that doctors can't prevent cancer. You know that medical science, while not perfect, can still provide good advice. We can no longer afford to debate if human-induced changes to the climate system are occurring. They are. We need to start considering how to adapt to the impacts of the changes that are

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coming and work diligently to ensure that we do not make the problems even worse. The bill before this committee is a first step toward including the consideration of climate change in our planning processes by acknowledging the costs imposed by continued use of fossil fuels. Thank you. [LB567]

SENATOR CARLSON: Okay. Thank you for your testimony. Are you Dr. Rowe? [LB567]

CLINT ROWE: Yes, I am. [LB567]

SENATOR CARLSON: Okay. Thank you. Questions? Senator Dubas. [LB567]

SENATOR DUBAS: Thank you very much, Senator Carlson. Thank you, Dr. Rowe. As a dryland farmer, my family and I pay a lot of close attention to weather and weather patterns and, you know, we read a lot of the extension reports and what have you. And you know, I've been hearing and reading that we're entering a new normal in our weather patterns, but what's a normal weather pattern? [LB567]

CLINT ROWE: That's a very good question. Normal, a normal weather pattern probably does not exist. Weather is highly variable day to day, and we know that here in Nebraska especially. Normal is just a climatic average. We calculate normals as a 30-year average. And there is no normal pattern of weather, I would say. Okay? It's constantly varying and constantly undergoing variations. [LB567]

SENATOR DUBAS: Well, then, you know, if you look back over decades or over time, it appears we have cycles. You know, you have the '30s and... [LB567]

CLINT ROWE: Uh-huh. [LB567]

SENATOR DUBAS: ...and then the '50s and, you know, we had a, you know, a dry spot in the '70s. I mean isn't that just how we live in our environment? There are those wet times and there are those dry times and... [LB567]

CLINT ROWE: That's true. And there are climatic variations, as I mentioned, over all sorts of different time scales. But what we're seeing lately has been...can be completely...can be attributed to the increase in CO2 that humans have caused over the last 100-150 years since the industrial revolution and models that don't include those in their calculations, which actually show a cooling trend over the last 20 or 30 years, and we're seeing an increase in temperatures globally. [LB567]

SENATOR DUBAS: Kind of a personal question: I've heard people say because of the amount of irrigation that we have in Nebraska, especially through pivots, that we, you know, we're putting moisture into the air, so to speak. [LB567]

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CLINT ROWE: Uh-huh. [LB567]

SENATOR DUBAS: Does that contribute to our humidity, the amount of irrigation that we have? [LB567]

CLINT ROWE: Most likely, yes. In fact, the other thing, too, is that if you've ever...you know, if you ever have gone swimming on a hot day and hopped out of the pool and you get a chill, it's also a cooling effect which may be masking some of the temperature increases that we might have experienced here in Nebraska over the last, well, over the last 30-40 years. [LB567]

SENATOR DUBAS: One more question. [LB567]

CLINT ROWE: Certainly. [LB567]

SENATOR DUBAS: Is it going to rain this summer? (Laughter) [LB567]

CLINT ROWE: At some point it will rain somewhere. (Laughter) [LB567]

SENATOR DUBAS: How about around Fullerton, Nebraska? [LB567]

CLINT ROWE: I wish I could tell you. [LB567]

SENATOR DUBAS: I appreciate that. Thank you. [LB567]

SENATOR CARLSON: Okay. Any further questions? Okay, Dr. Rowe, thank you for your testimony. [LB567]

CLINT ROWE: Thank you. [LB567]

SENATOR CARLSON: Welcome. [LB567]

ROBERT OGLESBY: Good afternoon, Senator Carlson and the committee. I'm Dr. Robert Oglesby. I'm a climate scientist. I have about 30 years' experience working on climate and climate change. And I'm going to follow Dr. Rowe by talking about some of the more specific changes that we can expect for Nebraska itself. The projections are that, due to increases in greenhouse gases as a result of human emissions, Nebraska will warm by anywhere from 4 to 10 degrees Fahrenheit between now and the end of the century. Another way of looking at that is 7 degrees, plus or minus 3. That would be the range of uncertainty that we have in our models. Okay? It will get warmer. That's pretty much a given. In fact, it already is. We're already seeing it. Projections for precipitation, on the other hand, they're much less clear for Nebraska and it appears



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that there may well be little change overall in rain and snow. The models all suggest it's going to tend to get wetter to the east and to the north in the U.S. and drier to the south and to the west. We seem to be in the middle. Nonetheless, even if there is no precipitation change, in a warmer world it will still be drier because of greater evaporative stress. The thing we really need to be worried about, however, is snowpack in the Rockies. All the projections are that snowpack will decrease and decrease by a lot. This is both because it's warmer, so there's more rain in winter, less snow, and because there is projected to be less precipitation overall. The importance here is that snow melts slowly in the late spring and early summer. River flow in the Platte River and Missouri River critically depends on that slow snowmelt. If it falls as rain in February, it's out to the Gulf of Mexico very quickly. Okay? We need that steady release of water from snow and it looks like that's going to be a major problem for us. Turning to extreme events, extreme events are likely to be more common in summer, okay, and also more extreme. That is, we could expect more droughts and that the droughts will be worse, but we could also expect that there would be more flooding rain events. When it rains a lot, the warmer atmosphere can hold more moisture; it's going to just simply rain out more. In winter, on the other hand, we will expect less, fewer extreme events, such as blizzards, but those blizzards that do occur are likely to be worse, to have more snow, again, because that warmer atmosphere is holding more moisture. Now you mentioned about irrigation and one of my points I wanted to make is besides these global effects, human activities local to Nebraska can also be important. Okay? In particular, the advent of large-scale irrigation since about the 1960s has kept the summertime climate in Nebraska cooler and wetter than it otherwise would have been. Okay? And the implication here is if reduced water availability, for example, due to reduced snowpack in the Rockies, curtails irrigation in part or in whole, that's going to lead to warming and drying all by itself. That could then exacerbate the watering and drying due to increased greenhouse gases. Thank you very much. I'm happy to take any questions. [LB567]

SENATOR CARLSON: Okay. Thank you for your testimony. Questions of the committee? Senator Brasch. [LB567]

SENATOR BRASCH: Thank you, Chairman, and thank you, is it Dr. Oglesby? [LB567]

ROBERT OGLESBY: Dr. Oglesby, yes. [LB567]

SENATOR BRASCH: I'm curious. Do all the climatologists share your diagnosis here or prognosis or what do we...your forecast? [LB567]

ROBERT OGLESBY: There is never 100 percent consensus in anything in life, much less in science. So, no, only about 97 to 98 percent of all true climate scientists believe in it. There's always, you know, 2 or 3 percent, that are, oh, well, what if? That said, most of the people who claim they're scientists, who speak out against climate change, they may well be scientists but in most cases they are not climate scientists. Their

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expertise is actually somewhere else. [LB567]

SENATOR BRASCH: And are you with the university? [LB567]

ROBERT OGLESBY: I am with the university. [LB567]

SENATOR BRASCH: And how many climatologists, I'm curious, does the university have? Senator Johnson and I and a few others went to a water conservation meeting... [LB567]

ROBERT OGLESBY: Uh-huh. [LB567]

SENATOR BRASCH: ...and there was another climatologist there that gave us a program and so now I see maybe...how many are at the university? Is that a whole department? [LB567]

ROBERT OGLESBY: Oh gosh, there's probably between...well, I have a joint appointment in the... [LB567]

SENATOR BRASCH: Uh-huh. [LB567]

ROBERT OGLESBY: ...Department of Earth and Atmospheric Sciences and there's probably about four of us I would consider climate experts as opposed to atmospheric science experts. But the other part of my joint appointment is in the School of Natural Resources and, of course,... [LB567]

SENATOR BRASCH: I see. [LB567]

ROBERT OGLESBY: ...we have the Drought Mitigation Center, we have the High Plains Regional Climate Center. So there's probably eight, ten, a dozen. I'd have to stop and think and count, but, yeah, there's quite a few of us. [LB567]

SENATOR BRASCH: And is there...is this to teach students or is it projections and then is there an action plan in place or just to make...you know, I'm very curious on climatology now that I'm seeing more and more of them every day. [LB567]

ROBERT OGLESBY: Some of them, for example, the person who's going to follow me is a staff scientist, working... [LB567]

SENATOR BRASCH: Okay. [LB567]

ROBERT OGLESBY: ...primarily on questions of drought. I have a regular faculty appointment so I do a combination of teaching, and I teach classes such as the climate

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system analysis and prediction, theory of climate, and climate modeling. But I also spend a lot of time doing research and my research involves the use of global and regional models of climate. [LB567]

SENATOR BRASCH: No, I... [LB567]

ROBERT OGLESBY: Has been since I did my Ph.D. back in the '80s. [LB567]

SENATOR BRASCH: And I do admire and appreciate your work. It's fascinating here too. [LB567]

ROBERT OGLESBY: Thank you. [LB567]

SENATOR BRASCH: And was just very curious about the consensus, if it's, you know, all moving one direction or if you challenge each other. [LB567]

ROBERT OGLESBY: Oh, we challenge each other all the time. [LB567]

SENATOR BRASCH: Okay. All right. [LB567]

ROBERT OGLESBY: And trust me, you know, there's a common misperception. I mean, you know, if somebody could definitively prove it correct or definitively prove it wrong, they're probably looking Nobel Prize. [LB567]

SENATOR BRASCH: All right. [LB567]

ROBERT OGLESBY: But the reality is when there's 97 to 98 percent consensus, I got to go with that. [LB567]

SENATOR BRASCH: Okay. [LB567]

ROBERT OGLESBY: I mean it's what I see myself and I don't really see believable arguments from that very tiny percent that try and claim it's not true. [LB567]

SENATOR BRASCH: Well, thank you for your testimony today. [LB567]

ROBERT OGLESBY: Sure. [LB567]

SENATOR CARLSON: Okay. Any other questions? I have a question... [LB567]

ROBERT OGLESBY: Uh-huh. [LB567]

SENATOR CARLSON: ...because I hear this frequently, and I don't know the degree of

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truth, but that in Nebraska we have 1 million acre-feet of water coming into the state every year and 8 million acre-feet leaving. Do you think that's a ballpark truth? [LB567]

ROBERT OGLESBY: Are you referring to the extraction of water, groundwater from the aquifer? [LB567]

SENATOR CARLSON: No, not necessarily. Rainfall and river flow that comes in, and rainfall that...and then it would really be streamflow that goes out, because we have a whole lot of water that ends up in the Missouri River, but... [LB567]

ROBERT OGLESBY: Oh, okay. Okay. What...okay, so you're not talking about the human extraction. What you're talking about is the fact that the Sandhills, which basically are the heart of the Ogallala Aquifer, rivers such as the Loup or the Elkhorn are fed most years. Even this past summer the drought was so bad that flow was reduced there. But normally that water is basically fed by the aquifer via artisan springs and so is able to maintain a steady flow. That's why I specifically said the Platte and the Missouri would be the rivers at risk because of the snowmelt. The rivers that are fed basically by the Sandhills aquifer, the aquifer under the Sandhills, they're much less at risk. This would primarily be the Loup, the Elkhorn, and the Niobrara, after it gets influenced by the Sandhills. [LB567]

SENATOR CARLSON: All right. You also inferred that we could go through stretches of climate...and I'm not sold on this but I think it's a possibility, we could go through stretches of climate where it will be drier and warmer for a longer period of time and then wetter and cooler for a longer period of time. And if that's the case and when that occurs, then wouldn't it be even more important than it is today that we try and hold water in the western part of the state and perhaps some in the northern part of the state so that in dry times we've got water that is there for use instead of running through and out the Missouri River? [LB567]

ROBERT OGLESBY: That would make a lot of sense. But, of course, the problem as we go forward is if you're going to store the water in the western part of the state, that's probably going to be primarily from snowmelt from the Rockies. And if their projections are that that snowpack is going to drastically decrease, you may not have the water available to store. [LB567]

SENATOR CARLSON: But you said...I think you said that when we have longer periods of heat and dry, we also have longer periods of precipitation. It may not be in the form of snow; it will be in the form of rain. And we should still, it seems to me, try to be in a position where we can hold as much of that rainwater back as possible. [LB567]

ROBERT OGLESBY: If we could. Now the problem is the reservoir system in the entire west, basically everywhere west of the Missouri, is designed, the capacity is designed to

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have this water come in slowly, okay, in the spring and summer, and then it can get dispersed out as it's coming in. It can get dispersed out for purposes such as agriculture. If you're going to try and capture this rainfall instead of snow, you must have much larger reservoir capacity. You're just going to have to build much larger reservoirs because you're then going to have to store all that water so you can use it in the summer, rather than have the water being replaced in the summer through the snowmelt at the same time that you're using it. [LB567]

SENATOR CARLSON: Okay. And there's some belief that we're probably not using to the fullest capacity the structures that we now have and it seems to me like if we're going to go through periods where we get more rainfall than normal for a longer period of time, let's get those existing structures in a position where we can hold more water and that we can use our canal systems more effectively so that we've got better recharge and maybe helps us prepare for these years that we go through, because we have got to have water in Nebraska. [LB567]

ROBERT OGLESBY: Yes, I agree. Now when I mentioned about, in terms of extreme events, about more flooding rains, I'm talking about summer thunderstorms that are causing flash flooding, okay, and they would be highly localized storms. They're not dropping a tremendous amount of water overall. They are dropping a tremendous amount of water in one location and leading to flooding in that location. So I really don't think this increase in extreme storms and these flash flooding storms is really going to contribute that much new water overall. [LB567]

SENATOR CARLSON: Okay. Okay. Thank you. Any other questions? Thank you for your testimony. [LB567]

ROBERT OGLESBY: Thank you. [LB567]

SENATOR CARLSON: Next. Welcome. [LB567]

MARK SVOBODA: Good afternoon, Chairman and members of the committee. My name is Mark Svoboda. I'm a climatologist with the National Drought Mitigation Center. We're located in the School of Natural Resources at the University of Nebraska-Lincoln. [LB567]

SENATOR CARLSON: Would you spell your name? [LB567]

MARK SVOBODA: Yeah, S-v-o-b-o-d-a. That's Mark with a K. So today the views expressed are my own, as a scientist, and not necessarily the views of the University of Nebraska-Lincoln. But I think that the critical issues raised in this bill are vital to the future of Nebraska and our citizens. As such, I'd like to provide a few comments related to LB567. So I think the drought of 2012 and '13 now is an eye-opening extreme event,

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coupled with the extreme flooding of 2011, in back to back years now in the Missouri Basin in Nebraska, in particular. And what we saw was that for 2012 we saw not only the hottest year on record in Nebraska but also the driest, so we had that double-edged sword there, that combination you don't like to see. It was also the warmest year on record for the United States. And in fact, seven of the ten warmest years on record in the United States, with data going back to 1895, have occurred in the past ten years. Early loss estimates just for the drought, not taking into account Superstorm Sandy, ranges anywhere from \$35 billion to \$77 billion. And crop indemnity payments for 2012 for the U.S. have reached...already reached \$14.7 billion and counting for 2012, and \$1.44 billion for Nebraska. And this does not include livestock, which is another major impacted sector. Fire was also another major impact on our state last year with a record 500,000 acres burned. This is double the previous high number of acres burned record year that we had seen, and in fact three of the past...or three of the five highest acres burned years have occurred since the year 2000, based on data going back to 1964. A study by Climate Central using U.S. historical climatological network data, the archive there has shown that since 1970 all states in the lower 48 have warmed and the rates of warming are double that of the past 100 years. The U.S. Department of Agriculture recently released a report on February 5 of this year entitled "Climate Change and Agricultural Effects and Adaptation," which synthesizes the scientific literature on climate change effects and adaptation strategies for U.S. ag. While U.S. agriculture and resource management have long histories of successful adaptation to climate variability, the accelerating pace and intensity of climate change presents new challenges to be addressed, as highlighted in this report. For example, the ag report indicates increases in atmospheric carbon dioxide, rising temperatures, and altered precip patterns will affect ag productivity. Climate change will exacerbate the stresses already occurring from weeds, insects, and disease, and these patterns are shifting. Beyond 2050, changes are expected to include shifts in crop production areas, increases in pest control expenses, and greater disease prevalence. In January of this year, a technical report by NOAA entitled "Regional Climate Trends and Scenarios for the U.S. National Climate Assessment," specifically Part 4 with regards to climate in the U.S. Great Plains, concluded that temperatures have generally been above the 1901 to 1960 average for the last 20 years, both annually and seasonally, and these trends are statistically significant for all seasons in the northern Great Plains, where Nebraska is located. Trends in precipitation are not statistically significant for any season and there has generally been an increased trend in freeze-free season. The average freeze-free season, or growing season length, during 1991 to 2010 was about six days longer than during 1961 to 1990. So recent years, like 2011 with the record flooding in the Missouri and the record drought of 2012, provide us with a great opportunity as a state to proactively investigate and dialogue about our vulnerabilities to climate extremes. I see this dialogue and any resulting process or results out of such dialogue as an opportunity to help educate and prepare the state and our citizens for a future as a means of helping us all better steward the tremendous resources that exist within Nebraska. Thank you for your time and attention. [LB567]

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SENATOR CARLSON: Okay. Thank you for your testimony. Questions of the committee? Okay. Thank you. [LB567]

MARK SVOBODA: Thanks. [LB567]

SENATOR CARLSON: Next. Welcome. [LB567]

KIM MORROW: Thank you. Good afternoon, Chairman, members of the committee. I'm interrupting a couple of climate scientists right now because I have to leave early. I am Reverend Kim Morrow and I speak to you as a representative of the faith community in Nebraska. I serve as minister of sustainability at First Plymouth Church here in Lincoln, and on behalf of my congregation of 3,500 people, as well as the scores of faithful environmentalists I interact with in the community each week, I offer my support of LB567. [LB567]

SENATOR CARLSON: I'm going to stop you long enough to spell your name too. [LB567]

KIM MORROW: I forgot. Thank you, M-o-r-r-o-w. [LB567]

SENATOR CARLSON: Thank you. [LB567]

KIM MORROW: First name Kim. In my opinion, what is all too often lost in our public debates is the moral dimension of our decision making. While this bill may at first glance seem to be about the technicalities of amending language used to guide our public power districts, it is actually about the moral dimension of how we, as Nebraskans, wish to live upon the earth. In the second creation story from the Book of Genesis, God calls forth creation from the ground itself. All of life, plants, animals, and humans, have their common origins in the sense of the sacred and fertile ground. God then puts Adam in the Garden of Eden to till it and to keep it, not to plunder or exhaust it, but to keep it. In Deuteronomy we hear that the Lord your God is bringing you to a good land, a land of flowing streams, a land of olive trees and honey where you will lack nothing and where you will bless the Lord your God for the good land He has given you. In Psalm 104 we hear a moving testament to the awesome beauty of creation that God has made where all living systems are dependent upon one another to sustain the gift of life. In these examples we are reminded that we are only here but for the grace of God who brought forth all of creation in God's image. The land on which we live has been entrusted to us as a gift of life and we have been asked from the beginning to be its stewards. A simple truth that we tend to forget in the twenty-first century era is that we depend on the earth for our very lives, as humans always have. Unfortunately, the reality of climate change has placed this dependency in danger. Climate scientists are unanimous in their warnings of a significantly altered climate in the years ahead and the dramatic effects it

will have on agriculture, public health, housing, food supply, transportation, the economy, and more. We are at a time when the solutions of the past are no longer viable. Climate change is the most pressing moral issue of our time. As leaders, we are being called upon to make wise and forward-thinking choices to protect our children, our land, and the most vulnerable populations in society. At the current time, coal-powered electricity is understood to be the cheapest and most cost-effective source of power, but this assumption does not take into account the disastrous impacts that coal has on the environment and on public health, particularly on vulnerable segments of society. Communities of color and low-income communities bear the disproportionate share of the deaths and illnesses associated with pollution from coal-fired power plants, according to Robert Bullard, director of the Environmental Justice Resource Center at Clark Atlanta University. A report commissioned by Physicians for Social Responsibility in 2009 concluded that coal contributes to four of the top five causes of mortality in the U.S. and is responsible for the increasing incidence of major diseases already affecting large portions of the U.S. population. Those who study public health concur that it is time to stop pollution from coal-fired power plants and to save the thousands of lives that are affected by it. In addition, we can no longer afford the environmental degradation caused by coal-powered electricity. As you undoubtedly know, coal plants are the nation's top source of carbon dioxide emissions and the main contributor to climate change. In 2011, the U.S. emitted a total of 1.7 billion tons of carbon dioxide into the atmosphere. In addition, coal plants are responsible for releasing sulfur dioxide, nitrogen oxides, mercury, and particulate matter into our air and water. I feel quite sure that this is not what God intended when he promised a good land to his people. We have the opportunity to change this. LB567 would wisely expand the criteria by which decisions are made about procuring power in Nebraska, acknowledging the many factors that truly lie behind the effects of our actions. Crucially, it will open the way for the procurement of more renewable sources of energy in our state, a move which is critical that we make now, before the effects of climate change worsen. For our people, for the land that God has bestowed to us, and for a future in which we have solved our challenges with courage and compassion, I urge you to support LB567. Thank you. [LB567]

SENATOR CARLSON: Okay. Thank you for your testimony. Any questions? Seeing none, thank you. [LB567]

KIM MORROW: Thank you. [LB567]

SENATOR CARLSON: Welcome back. [LB567]

JOHN POLLACK: Thank you. John Pollack, J-o-h-n P-o-l-l-a-c-k. I'm a meteorologist, retired from the National Weather Service. My biggest motivation to testify on this, since you've already heard from people who are actual climate scientists rather than just forecasters, is my frustration with hearing OPPD telling me and other people who have



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been on their case to cut back on the coal burning and consider alternatives for several years, over and over again, our hands are tied by the Legislature. We can't consider this stuff because the only costs that we're looking at is the cost that's coming on your bill every month at the meter. You know, it's, we can't look at environmental costs, we can't look at health costs or anything else. They're just not part of the equation and we can't make them part of the equation because of the Legislature. So I'm asking you to help change that with LB567. My few observations on the climate part of it are, as a forecaster, I have to look at situations and come up with ideas of what the weather is going to be, and we use short-range models all the time to do that. But I will say that when I started my career back in the late 1970s, if I saw a situation where we were getting cold air straight out of Canada for four days at the beginning of March, like we're just getting it now, I would not be calling for a high somewhere up near freezing. It would be maybe in the low 20s. So even though it's tough to take each individual situation and attribute it to global warming, I can see how the forecasting rules are changing since the beginning of my career, because we just don't have the cold air that we used to coming from Canada. Even in the same situation, we're still going to have cold spells and warm spells, but the cold spells are packing less punch and the warm spells are packing more punch. In that regard, one of my concerns is that we were certainly hot enough last summer, but I saw a worse heat dome over Nebraska in 1995 than I did last summer. We didn't set as many heat records because we had more moisture going into that heat wave in 1995 and the evaporation of water helped cool our air down. The extra humidity drifted over toward Chicago and killed a bunch of people. That was their problem. But we've had a lot of instances the past few years where we've been having really exceptional heat domes sitting up over Europe, where they've been killing people, over Australia, and one of these days our turn is coming. We're going to have a heat dome that's worse than the one that we saw last year, because those are a product of global warming. And when it comes, we're going to get nailed worse than we were in the '30s. An interesting illustration about the '30s: A lot of our heat records for summer heat were still...were held in 1934 and '36, but in 1935 something interesting happened and in 1937. In 1935 they had 20 inches of rain in northeast Colorado. There was a big wet period in a place you'd never expect it, and we had the Republican River flood. In 1937 things were starting out okay. On August 15 there was one really hot, windy day and it killed the corn where it stood. That's in our record books. What I would say for this situation is that if we get the 7 degrees of warming that Dr. Oglesby is talking about by the end of the century, the Corn Belt is no longer in Nebraska because we'd be having a climate that is now kind of what you have in northern Oklahoma. That's not in the Corn Belt. We might be thinking about cotton, but it's not going to be growing corn. Thank you. [LB567]

SENATOR CARLSON: Okay. Thank you for your testimony. Any questions? Seeing none, thank you. [LB567]

ANDREW JAMETON: (Exhibit 14) Senators, my name is Andrew Jameton. I've been on

the faculty at the University of Nebraska Medical Center for almost 30 years and lately teach mostly at the College of Public Health in areas of environmental health and health effects of global warming. I'm also a member of Physicians for Social Responsibility, but I am not a physician. My last name is spelled Jameton, J-a-m-e-t-o-n, a T instead of an S. The scientific literature in medicine and public health amply show that coal presents two major independent sets of health problems. The most immediate set consists in the health problems, as Reverend Morrow mentioned, related to toxic output of the combustion of coal. This has been known for centuries, and progress in science in the last decades has only strengthened the evidence for these problems. The key chemicals, already mentioned in testimony, cause a number of toxicity-type problems, but also are involved in the formation of ground level ozone and smog. Depending on how much of this you breathe, it's a major factor in the major causes of death. I'm sorry, let's put it this way. It's a factor in the major causes. How big a factor I think is a key question. It's a factor in the major causes of death and illness in the U.S.--heart disease, cancer, stroke, and respiratory diseases. Mercury is especially toxic and concern about it has led well-known neurologist Alan Lockwood, M.D., to write a book just out titled "Silent Epidemic," reviewing the neurological and other health impacts of coal. These days it's hard to wave around the book because they're all on e-readers, but there it is. Coal emissions, as it turns out from the neurologists' point of view, are yet another reason why, as we used to say, Johnny can't read. The proportion of deaths from coal combustion is significant. It's hard to estimate though. My unchecked, back-of-the-envelope guesstimate based on the articles I've reviewed and reports gives about 7 percent of these main forms of mortality--heart, cancer, stroke, and lung. So by this estimate, coal-related deaths in the U.S. in numbers, 100,000 to 120,000, top each of homicides, suicides, traffic deaths, and diabetes. Now the second problem set, kind of ironically, comes from the least dangerous and least toxic side of coal, and that's the carbon dioxide. And as the climatologists have pointed out, if allowed to continue, carbon dioxide output globally, eventually we'll be radically transforming the earth's environment. Many of the health risks of these changes are already apparent in episodic heat emergencies, as John Pollock described, and weather extremes, storms and so on. These will inevitably become more intense as decades go by. In the long run, as we reach and pass 2050, the range and degree of health problems will become extremely grave related to migration, water shortages and conflicts, and economic and agricultural failures. Here in Nebraska and in the Great Plains and southwest, multiyear drought poses a significant long-term health hazard. And by the way, let me add one of the problems that civil engineers are calling attention to and Bob Oglesby mentioned is that as river flow decreases due to the less rainfall out in the mountains, water levels maybe get low to increase hazards to power generation plants by coal and nuclear. So we'll have to look ahead to that. And so wind and solar might help to adjust for those risks. It will eventually become too hot to work outside in even the coolest parts of the coolest summer days. It's my hope that this legislation allowing our public utilities to take into account the health costs of their incredibly valuable service of providing ample and reliable electrical power will allow and spur us to shift quickly to safer solar and wind

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sources, as public policy in Germany has already achieved where, in a much gloomier climate, nearly 30 percent of power is already being generated by these solar-based alternatives. [LB567]

SENATOR CARLSON: Okay. Thank you for your testimony. Any questions? Thank you. [LB567]

ANDREW JAMETON: Okay. Thank you. [LB567]

SENATOR CARLSON: Welcome. [LB567]

DAVID CORBIN: Thank you. Senator Carlson, members of the committee, my name is David Corbin, C-o-r-b-i-n. I'm here today as the Nebraska representative to the governing council of the American Public Health Association. American Public Health Association is the largest and most prestigious public health association in the world. Since 1995 the American Public Health Association has deliberated on and passed policies relating to public health and climate change, and they have summaries on their Web site about this. But today I want to just draw attention to: You've heard from the scientists. My aspect of public health, having been a professor at UNO, now retired emeritus professor, is to put some of the science to practice and to policy, and that's where you come in and why we're here today. It's a hard sell sometimes to take something that you can't see, you can't smell, you can't touch, and say this is harmful to you. But we have learned with water, when we learned that there were microorganisms in water that could harm us. And as a result of that, we passed laws to protect the water so that the water that we drink today is safe. We know about radiation that we can't see and we can't touch and we can't feel and we can't smell, but we know that it can harm us and we have protections against radiation. We know about another form of that, radon, carbon monoxide, and now we have the evidence for carbon dioxide and we know what that does to us. If we had failed to act on those other things that we can't see, that don't see intuitively it doesn't seem like any of this could be harmful to us because we can't put our hands around it, but we've learned from the science and we learn that if we didn't act on the science we paid the consequences. It was made reference to the Chicago incident where many people died from heat. So part of the costs that we're trying to look at in this particular bill is what do we have to have? Do we have to have...if Chicago had cooling centers, a lot of those people wouldn't die. Do we have those cooling centers? Are we prepared for an extreme heat event? My answer is, in the inquires that I've done, is, no, we are not. Those are part of the external costs that we have to look at when we're looking at what does energy cost us, and it should be for all types of energy, as been reported in the previous testimony. We're not picking on any, but we do know the ones right now that are causing a lot of the damage. We need to factor that in. That is cost to each and every one of us in our health. One last thing that I'll say is that when you see those major storms, Sandy and Katrina and all of those kinds of things, and you see the estimates of the costs of these, they are also leaving

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out the cost to the environment and the health. They tell us what it costs to replace a house, to replace...for your crop insurance. They do not tell us, and we are just beginning to collect all those data, on the costs to our health: the mold from the flooding and what that costs to us, the pollens because of increased...of the different climate and the different heat. So we know that there are those external costs and now we have much better ways to measure those, and that's what this bill will do. Thank you. [LB567]

SENATOR CARLSON: Okay. Thank you. Any questions? Yes, Senator Johnson. [LB567]

SENATOR JOHNSON: Thank you, Senator Carlson, and thank you, Doctor. In the opening statement, it says LB567 requires the Nebraska Public Power Review Board to consider the following additional factors. How do you feel that can be accomplished? Does that mean that potentially the seven testifiers that have come, six or seven, ahead of you become part of that review board for us to get the analysis that you have? Or how...do you have the solution as to how we incorporated that into the Power Review Board? [LB567]

DAVID CORBIN: I'd like to say I had a perfect solution but I don't, but I can again draw on those examples that I gave. Did we know all the things that we had to do with water when we first discovered the microorganisms in there? No, but we started the steps, step by step, and we started saying, okay, these are the things that we need to do. Did we have all the data? No, but we started the steps and we started the procedure and we started the conversations to be able to do that. That's what this bill allows us to do. It doesn't say we have all the answers and everything is clear-cut. It is not, by any stretch of the imagination. But the evidence is mounting just as it did in those previous examples that I did. So if I just came and said, oh, by the way, radon might cause problems in your home, nobody would say, well, let's do something about it. You had to gather the evidence and then you'd say, well, how much radon. And that has changed through time so that amount of radon that we can be exposed to that you might measure in your basement that they said was a safe level, it actually has gone down. We think it's...less of it can cause more harm than we thought. [LB567]

SENATOR JOHNSON: Thank you. [LB567]

SENATOR CARLSON: Senator Dubas. [LB567]

SENATOR DUBAS: Thank you, Senator Carlson. Is the medical profession just getting into this global warming discussion and bringing these...these...their concerns to light because of what's happening with global warming, or have you been there and I've just kind of missed it? [LB567]

DAVID CORBIN: Well, I can't speak for the medical profession. I'm in public health and

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the American Public Health Association, although there are many physicians in that group, it is predominantly people who work in health departments, work in field work, doing...collecting all those...going out mosquito, restaurant inspection, the whole gamut... [LB567]

SENATOR DUBAS: Okay. [LB567]

DAVID CORBIN: ...of what public health is. But in terms of public health, we, like I said, we have policies that go back as early as 1995, and I didn't look back any further than that. In terms of medical, you know, they call it practicing medicine. So there are people who are scientists in medicine and there are people who have to put that science to practice and to policy, just like I'm a public health worker who I don't do the climate research, but just like we have to say, well, so we know all of this, so what are the policies? That's what I've been doing all of my career. [LB567]

SENATOR DUBAS: Thank you. [LB567]

SENATOR CARLSON: Any other questions? Okay, thank you for your testimony. [LB567]

DAVID CORBIN: Thank you. [LB567]

SENATOR CARLSON: Welcome. [LB567]

CYNTHIA TIEDEMAN: Thank you. Good afternoon, Senators. My name is Cynthia Tiedeman, T-i-e-d-e-m-a-n. I would like to make some comments related to my experience as a registered nurse in Omaha where I've been concerned about the health impacts of the pollutants from the coal power plant in our city. I'm a retired school nurse with Omaha Public Schools, and I'm particularly concerned about children with asthma struggling to breathe. I think the north Omaha coal-fired power plant is hazardous to the health of our kids. The coal plant emits sulfur dioxide and nitrous oxide and both of these chemicals are respiratory irritants associated with asthma attacks. Every year the OPS school district...students in the OPS school district, students experience life-threatening breathing problems that necessitate emergency injection of epinephrine followed by 911 transport to the emergency room. Omaha's asthma hospitalization rate has been nearly double the national average. Asthma hospitalization rates and emergency room visit rates in Douglas County are highest in northeast Omaha. And that's where the power plant is. In addition, north Omaha's power coal station emits more than 300 pounds of mercury each year. According to the U.S. National Institute of Environmental Health, prenatal exposure to mercury may cause all sorts of neurological birth defects. And the very first woman who testified referenced that. Now I'm not able to state the cause of the health problems of the children I've cared for, but I do know the pollutants from our coal plant are not healthy. And research shows these pollutants are

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linked to asthma and neurological problems. I also know it is definitely better and less costly overall to prevent health problems rather than attempt to try to treat them. LB567 would take into consideration the entire cost of the generation. Thank you. [LB567]

SENATOR CARLSON: Okay. Thank you. Any questions? Thank you for your testimony. Welcome. [LB567]

PATRICIA FULLER: Thank you. My name is Patricia Fuller, F-u-l-l-e-r. I'm also a retired nurse and I support LB567 whether it's a bill or a study. I think we've paid far too long with our health for the cost of burning coal. I'd like to talk a little bit more about some of the causes of asthma besides the one that Cynthia mentioned. I think one of the most dangerous pollutants is soot, or particulate matter. Even at very low levels, soot contributes to asthma attacks, reduced lung function, heart attacks, and premature death. A growing body of research links fine particulate matter, commonly known as soot, with increased rates of asthma. And the major sources of particulate matter are fossil fuel combustion and solid waste disposal. Where this really plays a role is the size or the coarseness, it's measured as PM10 or PM2.5. Of the two, the smaller soot particular, PM2.5 has the greatest hazard. And the size of this is about the thickness of a human red blood cell. And because of this size, it can be inhaled deeply into the lungs, into the small airways and the alveoli directly into the bloodstream. Even at very low levels, air pollution, like smog and soot, are harmful to human health. Children are at increased risk from exposure to smog because their lungs are still developing and they're more likely to be active outdoors. So I think those are factors that oftentimes we don't consider when we burn coal. And it should be considered if they upgrade the north Omaha plant. They've recently settled a suit with MidAmerican who had a plant...I live in Council Bluffs, about one mile from that plant. They are going to phase out coal burning by the year 2016 in their two oldest boilers which did not have the bag houses and the technology available to filter some of the particulate matter and mercury. And in answer to your question, Senator Dubas, I know the American Nurses Association have done some studies related to climate change and coal. And a group called Health Care Without Harm, both of those organizations have gone to Washington, D.C. and testified before committees there about the harms of burning coal and how that contributes not only to global warming, but to some of our healthcare problems. So, anyway. [LB567]

SENATOR CARLSON: All right. Thank you. [LB567]

PATRICIA FULLER: Uh-huh. Thank you. [LB567]

SENATOR CARLSON: Any questions? Thank you. Welcome. [LB567]

VERNON LOUIS MUHAMMAD: Thank you. Hi, my name is Vernon Louis Muhammad, M-u-h-a-m-m-a-d. I'm a fourth generation "Omahan" and a father of six. My grandfather...grandparents moved here in the early 1950s to work in the meat packing

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place. I've called north Omaha my home for 44 years. When my four-year-old daughter, Summaya, came down with asthma, I began to question and seek answers of the healthiness of the environment in Omaha. We live less than four miles from the north Omaha coal plant. I learned that the coal plant emissions might have something to do with Summaya's asthma attacks. The 60-year-old plant has not been updated with modern pollution-reduction equipment. And according to the Clean Air Environmental Task Force, it has contributed to 14 premature deaths, 22 heart attacks, and 240 asthma attacks a year. And personally, my great grandfather passed away of a violent asthma attack. My brothers and sisters, I was the only one who did not get asthma, both of the my brothers and sisters did. My daughter, I have...over the four generations, we have counted 20-plus individuals with asthma, cancers, or respiratory problems. And I believe that here in Nebraska that we can do better by passing LB567. For years coal plants and other risky new generation sources have been evaluated on reliability and cost. But what has not been taken into consideration is the health of our families and our community as a whole. LB567 will evaluate the environmental impacts; they will evaluate the healthcare costs; and this is important to the low income communities which are typically the most affected by coal. The pollution from the north Omaha coal plant disproportionately affects the north Omaha community. This disparity means that those around the plant, predominantly low income African-American families, are significantly impacted by these coal plant emissions. Summaya is now 11 and we've been coping with her asthma for seven years, and the struggle hasn't been easy and our family has been forced to make tough decisions. Recently I had to make a tough decision and remove her from basketball team because asthma made running too difficult for her. For a father it is heartbreaking to watch asthma limit my child's community activities. One in five African-American adults in Omaha have asthma. And coal pollution can trigger asthma attacks. As a father, I can't stand idly by when I know there is something more that can be done. By passing LB567 we offer better and safer standards for communities who will receive new generation facilities. Where you live should not determine whether or not your child has clean air. A full impact study of new generation facilities and its total costs can protect our children. Let's make life a little easier for our future generations and their health and let's support and pass LB567. Thank you. [LB567]

SENATOR CARLSON: Okay, thank you for your testimony. Questions? Appreciate you coming. [LB567]

VERNON LOUIS MUHAMMAD: Thank you. [LB567]

SENATOR CARLSON: Thank you. Welcome. [LB567]

NEIL TABOR: Thank you. My name is Neil Tabor, N-e-i-l T-a-b-o-r. I'm a student in the School of Natural Resources at the University of Nebraska at Lincoln. Actually, Chairman Carlson, I believe you spoke to my environmental economics course last

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semester...last spring, I guess it would be. And in that course we spoke a lot about these different issues and externalities or things that don't show up directly as you look at something from the get-go. We spoke about how different Nebraska farmers work together so one may let a little more water run down the stream to their neighbor down the stream. Well, they also might put a little less Atrazine into that water so it's better for them. A lot of what we've centered around our concepts of, represent kind of Nebraska values like being neighborly. Things that might not affect or really help out the first farmer, but will kind of attribute to the greater good and support the greater good going forward. And I think a lot of that is expressed in this legislation. I also serve on the Student Government Sustainability Committee, and the cofounder of a student organization called Sustain UNL at the University of Nebraska-Lincoln. I've come here to speak about LB567 today because I believe it will be highly beneficial for students of my generation, as well as future generations going forward. The legislation opens up emerging markets for students interested in these technologies, bringing them from the coast into the center, helping retaining our best and brightest students, as well as opening up new opportunities for businesses that we've heard before in testimony. This bill also demands that the consideration be made that the benefits of any decision in this regard be made so that they outweigh the risks. And I think that's a very plausible way of thinking about decisions and should be expressed in pretty much any decision-making going forward. As well, this bill would accelerate the shift of these technologies in the future and unlock kind of new possibilities, locking into lower rates for...as we see different rates for dirty technologies starting to climb, but these new renewables are somewhat coming down to be more competitive. I think this bill would only forward the support of that. This bill is also very responsible and it advocates for the preservation and responsible use of our natural resources while anticipating the future effects of climate change as we've heard from previous testimony. It also preserves some of our water resources that would be required for some more coal plants or any other addition to those. As Senator Smith inquired on LB402 earlier, these revisions and also taking into account the life-cycle costs of these types of power, whether it be coal and the particulates and all the pollution and health risks that come out from that, whether it be nuclear waste and the lack of disposal sites for that as that continues, or simply recycling the turbine blades which seems like a very simple effective solution in my estimation. This bill does not provide an unfair advantage, in my view, to these new and emerging technologies, but rather puts them on a level playing field as we make the full considerations to the effects of everything that goes into these new power sources and their choosing of them. I feel this is a very proactive measure considering the health effects of air pollution and human suffering, as well as the economic impacts of furthering any of these health risks, whether that be death, cancer, or simply missed days of work. And it really, kind of, exposes what are the externalities of our current cheap energy system and what could be done to alleviate that and move forward with the future. I ask that you consider the implications of this bill for future Nebraska students and residents. I commend Senator Haar for authoring this legislation. I thank the committee members for their time and I would be happy to



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answer any questions. [LB567]

SENATOR CARLSON: Okay. Thank you. Any questions of the committee? What year are you at UNL? [LB567]

NEIL TABOR: I'm a senior. [LB567]

SENATOR CARLSON: And where are you from? [LB567]

NEIL TABOR: Omaha. [LB567]

SENATOR CARLSON: Okay, all right. Thank you for your testimony. Welcome. [LB567]

RON BINZ: (Exhibit 15) Good afternoon, Senator Carlson, members of the committee. My name is Ron Binz, it's R-o-n B-i-n-z. I was, until recently, the chairman of the Colorado Public Utilities Commission; from 2007 until 2011 I served in that role. And it was during that time that Colorado went from a, more or less, 1 percent renewable in the mix of generation resources of Xcel Energy all the way to today's level of 16 percent. During that time the Governor, Governor Bill Ritter, I'm sure you all know of him, coined the expression, "the new energy economy," and that's what Colorado built out during those years. We had an RPS, Renewable Portfolio Standard, that was passed by the voters in 2004 at 10 percent. The Legislature doubled that at 20 percent in 2007, and increased it to 30 percent in 2010. And the interesting news is the state is ahead of schedule in compliance with the 30 percent legislative mandate for the investor-owned utilities. When you flip on a light in Denver, one kilowatt hour out of six is from wind energy in the state. It's managed by Xcel Energy. And they're very proud of their ability to operate their system reliably with such high penetration of wind on their system. After leaving the commission, I've been doing a lot of things. And one of the things I was asked to do was to write a report, which I've handed out to committee members, entitled, Practicing Risk-Aware Electricity Regulation. Now this was aimed at state regulators. You don't have state energy regulators in Nebraska, but you've got boards of the public utilities and you've got the Power Review Board who, sort of, fills in that function. The point of my report was to stress that looking simply at the cost of energy, short term, or even longer term isn't enough. You need to look at also the associated risks that you're taking on when you make certain decisions about acquisition. Now, I agree with most of the testimony you've heard today about the environmental impacts and the importance of those. But I choose to look at this in a different way. What's the prudent utility in 2013 supposed to be doing? What should they be looking at for the future, not necessarily as environmental stewards, but as reasonable estimates of what the future risks are going to be. At Senator Haar's invitation, I was here about five or six months ago, I guess, to talk about this report. He had a public meeting and I also met with officials from OPPD, NPPD, and the Lincoln Electric System. I met with board members, I met with executives from those, and we

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had a very good discussion about this and I thought a very worthwhile discussion. I was very pleased and surprised to see Senator Haar come up with a bill which captured many of the things we talked about in that visit. Now this isn't an empty issue; this isn't a, sort of a, someday issue. The utilities in this state, over the next few years, are going to be facing decisions about hundreds of millions of dollars of investment to upgrade pollution-control equipment on existing plants to build new transmission, to build new generation, and it will be really important that they have a coherent set of basis for a judgment about those. And I think that's what this bill offers. In brief, I've been suggesting in this report that utilities need to diversify their portfolios beyond where they are now. Wind, especially Nebraska; Nebraska is a purple state, not politically, but if you look at the wind maps, it's purple, it's probably the purplest of the states. That's very good, that's Class 6 wind that you've got in this state in many cases. That's an unbelievable resource which you're not exploiting. I think the answer to many of the questions we had on the first panel today about why wind isn't growing more in Nebraska, is you need a home-court advantage of your utilities actually employing more of it. That will stimulate an industry in this state. And I am very strongly supportive of long-term planning by the utilities. And that is not just something to dispatch to utility engineers; that's a public policy obligation. And this body, as well as your created boards, have the responsibility to look at things, other, simply, than least cost. So my red light is on. I'll stop testimony now. I just...I think that the approach taken in LB567 is a good one. And I look forward to working with any member of this committee who would like any assistance or advice I can deliver in this regard. Thank you very much for taking my testimony. [LB567]

SENATOR CARLSON: Okay. Thank you for being here. Questions of the committee? Senator Smith. [LB567]

SENATOR SMITH: Thank you, Senator Carlson. Mr. Binz, thank you for your testimony. So you were with the Public Service Commission in Colorado. [LB567]

RON BINZ: That is correct. It's called the Public Utilities Commission there. [LB567]

SENATOR SMITH: Is that an elected position? [LB567]

RON BINZ: No, it's appointed. I was appointed by the Governor, confirmed by the Senate. [LB567]

SENATOR SMITH: All right. What was your background? What else is your...what background do you have? [LB567]

RON BINZ: My educational background is mathematics and economics. [LB567]

SENATOR SMITH: Okay. [LB567]

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RON BINZ: Prior to the appointment to the commission, I had a consulting practice in energy policy, what I'm doing again now. Before that, for 12 years in the '80s and '90s, I was the state's utility consumer advocate. So my job was to represent consumer interests before the Public Utilities Commission of Colorado. I've been doing this stuff, probably like you, most of my career. I've been involved in energy and energy policy since, more or less, 1980. [LB567]

SENATOR SMITH: All right, thank you. [LB567]

SENATOR CARLSON: Any other questions? Senator Dubas. [LB567]

SENATOR DUBAS: Thank you, Senator Carlson. I'm interested in the point you made about when you flip on the switch how much of that comes from renewable. And, I mean, we know that wind is not necessarily reliable and intermittent. Is that an issue for what Colorado has developed, as far as being able to provide that? [LB567]

RON BINZ: Senator Dubas, it's an issue, but not an insurmountable issue. These engineers at Xcel Energy have had a great time for the last few years figuring out how to do this. They're very proud of what they've done. We have, in some hours...Senator Smith, you've asked some questions in the first panel, some hours wind is as much as 55 percent of delivered electricity in Colorado. It's early morning hours, but it's there. They've learned how to predict the short-term behavior of wind so that they are able to line up resources to pick up the demand when wind drops off. We count wind for about a 12 percent capacity value. You were asking about that earlier...you...in a planning reserve margin, we use about a 12 percent capacity factor for wind. Which means you do back it up, you back it up with market purchases, you back it up with gas generation, you swing generation, hydro, all that comes into it. It's a very complex system. These engineers have just gotten very good at managing it. They see the ramps that we know wind can ramp up or ramp down and they learn to go with that. So on a capacity basis, we're at 30 percent wind, name-plate capacity; on the energy basis, we're north of 16 percent. Colorado added 400 megawatts of wind in November of 2012 in two projects. So it's...Xcel Energy is, you know, they're a normal utility; they're sort of a middle of the road utility who have decided that their obligations to the environment and good business practice means that they do this. So it's very manageable. We've not had to add capacity. We have, basically, used the existing capacity; we have used it in flexible ways. I hope that answers your question. Long answer, but... [LB567]

SENATOR DUBAS: One more question if I may, you know, we've been very proud in Nebraska about having one of the lowest rates in the nation. That's really been something that has helped us drive our economy and bring business or retain business in our state. Even though it appears we're starting to drop in those rankings. And so if we make a decision to start to move...that's always been what the Power Review Board

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has looked at, that low-cost delivery system. [LB567]

RON BINZ: Um-hum. [LB567]

SENATOR DUBAS: If we would make a decision to start to move away from coal or to try to bring more renewables in, or whichever direction you want to go, do you think that would help or hurt our rates? [LB567]

RON BINZ: Well, I can tell you that in Colorado, adding wind lowered rates; adding solar raised rates. When we did both, we kept rates about the same. There is a...the law in Colorado says you may not charge more than 2 percent...rates may not go up more than 2 percent for the addition of renewables under the Renewable Portfolio Standard. And we were at 2 percent. So you might say the rates went up 2 percent for the addition of all the wind and solar that we did in Colorado. But in fact, the wind displaced gas as a fuel. They would turn down the gas plants when the wind was available, saving gas. Now gas is \$2.75, \$3.25 an MCF right now. That's going to be about a wash with wind. But when we had...we had...the last wind contract signed in Colorado was \$27.50 a megawatt hour. It's 2.75 cents per kilowatt hour. That's cheaper than running gas plants. So a gas plant plus a wind farm is cheaper than a gas plant by itself. I know it sounds counterintuitive, but that's the way it works. [LB567]

SENATOR DUBAS: Thank you. [LB567]

SENATOR CARLSON: Okay, thank you. Senator Smith. [LB567]

SENATOR SMITH: Yes, very counterintuitive. Thank you, Senator Carlson. I'm going to differ with you on that, but do you have a backup gas generation...redundancy...is going to increase the cost. So I hear what you're saying, and it sounds...it's not quite that easy. Whenever you have renewable generation on peak, you're not going to have that capacity available on peak. You're going to have to have some type of redundancy and backup. I understand what you're saying. But I do believe that it will necessarily increase the rates. [LB567]

RON BINZ: Well, that wasn't our experience with wind. I would agree with you on solar, except there is a twist on that too. Solar is available during peak times when you have highest...we measure these things on an average cost basis. [LB567]

SENATOR SMITH: What is your...what is the rates in Colorado? [LB567]

RON BINZ: Well, it varies. The highest are the REAs; second is the "munis"; and I think the lowest, or well... [LB567]

SENATOR SMITH: Well, let's say residential, what is it? [LB567]

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RON BINZ: Residential rates, probably around 8.5 cents. [LB567]

SENATOR SMITH: Okay. [LB567]

RON BINZ: Um-hum, something close to that, maybe 9. [LB567]

SENATOR SMITH: And those rates have gone down over the last five to ten years in Colorado? [LB567]

RON BINZ: No, they've trended up less than the rate of inflation. [LB567]

SENATOR SMITH: All right. [LB567]

RON BINZ: But in real terms they've gone down, yes. But in nominal terms they've gone up; but, as I said, less than the rate of inflation. [LB567]

SENATOR SMITH: Okay, very good. Thank you. [LB567]

RON BINZ: Sure. [LB567]

SENATOR CARLSON: Okay. Any others? Okay, thank you very much for coming. [LB567]

RON BINZ: Thank you very much. [LB567]

SENATOR CARLSON: All right. Welcome, Duane. [LB567]

DUANE HOVORKA: Good afternoon. My name is Duane, D-u-a-n-e, Hovorka, H-o-v-o-r-k-a, here on behalf of the Nebraska Wildlife Federation. I realize it's Friday afternoon, but I'm going to ask you to put on your "imagineers" hat for just a couple of minutes and imagine that there is a major Nebraska electric utility that is looking at a clean energy alternative out there. It's an alternative where the utility would phase out most of their current coal-fired generation over time, replacing it with much greater expanded investment in energy efficiency, wind, a little solar, and new energy storage technologies. And the public benefits of that, as measured, would be pretty substantial: reduction by half or more in the sulfur dioxide, nitrous oxides, particulates that contribute, as we've heard, to asthma and heart disease; a reduction by half or more in the CO2 emissions that contribute to climate change; a reduction in mercury, arsenic, and other pollutants that end up in our rivers; increased jobs in Nebraska as we build wind farms, weatherize homes and help businesses make the most efficient use of their energy; and millions and millions of dollars that would stay in Nebraska, rather than leaving the state to purchase coal from Wyoming. Tremendous public benefits from that

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kind of alternative in the utility service area and also beyond. But there is a cost. And imagine, if you will, that they crunch the numbers and the cost came out that maybe you could do that clean energy alternative and pay about 2 to 3 percent more over time than you could for the least-cost alternative the utility is looking at going forward. Well, if that utility asked its owner-customers, the people in Nebraska, their customers, would you take the deal? Would you take that for that cost? Not all Nebraskans would. But I think you would find that a majority of Nebraskans would say take the deal. We'll pay a little bit more on our electric bill to get all of those clean energy benefits, the economics, the jobs, cleaner air. But here's the catch. The utility board knows that our Power Review Board that must approve the key parts of that plan, the construction of any new generation, the Power Review Board currently looks at really two things: what's the cost, and is this the right utility in order to build it? That's what they look at now. The Power Review Board doesn't look at all the environmental, health, economic, and job benefits that are involved in the change with the decisions that change. So, hypothetically, that hypothetical utility, the staff and the board are going to be very reluctant to consider and embrace that clean energy alternative if there are serious questions about whether the key pieces of it are going to be able to get approved at the state level. And that's one reason why we need this bill. Our electric utility boards, our public power boards, and the Public Review Board need to be looking at reliability and cost as they look to the future. But they also need to be looking at these other factors: health, our environment, jobs, our economy. And senators, I'll tell you, these are real choices. That clean energy alternative that I described is actually alternative S11, right out of the new draft, Integrated Resources Plan, from Nebraska Public Power District, the one that was just released several weeks ago. When the NPPD staff looked at that alternative, compared it to the very least-cost alternative they could identify for moving forward, and when you translate that cost into what would show up at a customer's meter, the difference is about 2 to 3 percent. So these are real costs, real challenges. Now whether to embrace that clean energy alternative, that S11 alternative, or one of the other many alternatives that NPPD looked at, that's a decision the NPPD board is going to be able to make. They're going to make that decision moving forward. But it's a very important decision that needs some real careful public debate and discussion. And it needs to not be shortchanged by...the decision needs to be not shortchanged by requiring that the utility only look at the least-cost alternative. As wind and solar costs fall, as fossil fuel costs rise, and as our understanding of the public costs of the energy choices that we make grows, really Nebraska electric utilities around the state are all going to be faced with similar kinds of choices. So LB567 would ensure that those environmental, health, risk, jobs, and economic...economics are all considered by our state electric utility boards, as well as by the Power Review Board, as we make those important decisions moving forward. Thank you for your time. [LB567]

SENATOR CARLSON: Okay. Thank you. Any questions of Duane? I'm going to ask you a question, and a statement as part of it. When you gave the example that we could have all these things for 2 or 3 percent more higher cost, everybody in this room will

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agree that smoking is bad, but a lot of people smoke anyway. And I'm not saying you should do it, but I think that pretty in-depth, accurate survey of what the people of Nebraska think, are you willing to accept, do you want a 3 percent increase? Now I don't know that the 3 percent is a fact. Do you know that it's a fact? Could it be higher? Could it be lower? But if it's 3 percent, for these health advantages, are you willing to pay that? I'd be interested in what a statewide survey that was accurate would show. And you may recall, I had a bill and you voted on it last November whether to extend term limits or not. And we used a survey to find out what people thought. I didn't like what the people thought, but it turned out to be pretty accurate. And so if you have that kind of evidence, I think that...and it's not biased, but it's...it could be proven that it's a good indication of what the people think, I think that's maybe an arguing point. But even if it is, you still have people that would say, well, I'm willing to pay that; others would say, no, I don't want to do it, I want to smoke anyway. And others would say, I can't afford it. So then we get into do we subsidize it. So, all these things enter into something that most of us, just by itself, would say things that contribute to good health would be good. So I'm not asking you to do a survey, I'm suggesting somebody does. And then convince the population that it's an accurate survey. [LB567]

DUANE HOVORKA: I think those are several great questions. I agree with you. And when surveys have been done, and they've asked people, hypothetically, would you pay 5 percent more, 10 percent more, what would you pay more for some of these benefits? Typically, up to around 5 percent, most people are okay with that. Beyond that, you start losing support. I'll be the first to tell you that being given a hypothetical question is different from being given an actual choice. And that if you said to NPPD customers here is your alternative, let's vote it, I don't know how that would come out. But I think that is...it's certainly a discussion and decisions that have to be made. And I think the other thing to recognize is that a lot of these costs, somebody is paying them right now. The cost of asthma, heart disease, cleaning up pollutants, somebody is paying for that now. We're just not paying for it through our electric bills. We're paying it through our health insurance bills, through emergency room visits, in that way. And so it's not a straight out would it cost you...would it cost our society 2 to 3 percent more to do this, because there are, certainly, savings on the other end. But I agree with you. I think it's a very important choice that we have to make. [LB567]

SENATOR CARLSON: Well, and we have all kinds of things that we talk about. And we hear from groups that want to spend more money on something today because it will save in the long run. [LB567]

DUANE HOVORKA: Sure. [LB567]

SENATOR CARLSON: So we hear that all the time. But this appears to me, by what Senator Haar said at the end of his introduction, we're looking at studying this anyway. I think that ought to be part of the study. Thank you. [LB567]

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DUANE HOVORKA: Appreciate that. [LB567]

SENATOR CARLSON: Oh, Senator Smith. [LB567]

SENATOR SMITH: Thank you, Senator Carlson. And thank you for your presentation. I just wanted to kind of add to what Senator Carlson was saying. I agree that an awful lot of the discussion from...at least coming from me is, concerns about escalated costs and rates to our average consumer out there. I mean, consumers are burdened terribly today. And, you know, there has been discussions about tax relief, and that doesn't appear that that's coming anytime soon. And, again, I just feel as if there has been a bit of misinformation presented that when you have renewable energy, and I agree with renewable energy, I think it's great to have it a part of the portfolio, it's got to stand on its own with the business case. If it's on peak energy that's needed, there's got to be some type of backup for it. And that's likely possible. You talk about market...purchasing it off the market. Well, where is that market coming from? It's probably coming from a base load fossil plant somewhere. And you talk about fossil fuels increasing; well, they're increasing quite a bit because of increase in regulation on those fossil plants. You talk about renewables falling; an awful lot of the renewable...drop in renewable pricing is due to subsidies. So it's not real clear, but I have a terrible feeling that if we don't take a measured approach to it, we're going to have rocketing rates, rocketing costs for electricity to our average consumer. And we have to be very, very careful how we proceed on it. [LB567]

DUANE HOVORKA: I agree we need to be...we need to watch the rates carefully and make sure energy is as affordable as we can make it. The drops in renewable energy and wind and solar, some of that is, in fact, the federal tax credits, but a lot of it is just improvements in the technology. And solar panel prices have dropped in half in just a matter of a couple of years. So some of it really is the market. In terms of the coal prices, it's the delivered price of coal in Nebraska, which is the mine-mouth price plus the rail rates that have been rising by about 11 percent a year over the last decade. And so that doesn't include all the emission controls. That's just the cost of getting it out of the ground and getting it to the power plants. [LB567]

SENATOR SMITH: And I'm guessing there is probably some folks that will be coming later to talk about it from a utility standpoint, so maybe they can address some of that too. [LB567]

DUANE HOVORKA: Sure. And the NPPD alternative, for example, includes 300 megawatts of compressed-air storage, like the project that they're looking at out in western Nebraska, so that when the wind is blowing, you don't need the power, you pump air into a cavern and then when you need the power, you pull the air out through a turbine and generate electricity and there's pumped hydro storage. So there are other



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technologies that can help you store that renewable energy. [LB567]

SENATOR SMITH: All right. Thank you. [LB567]

DUANE HOVORKA: Sure. [LB567]

SENATOR CARLSON: Okay. Thank you, Duane. [LB567]

DUANE HOVORKA: Thanks. [LB567]

SENATOR CARLSON: All right, how many more testifiers do we have? Two more, okay. Three more, okay. Make your way up here to the front, please, and be ready. Welcome. [LB567]

LINDA DUCKWORTH: Thank you, Chairman Carlson and committee. I'm Linda Duckworth, L-i-n-d-a D-u-c-k-w-o-r-t-h. I'm president of the League of Women Voters of Nebraska and you'll be happy to know that I've crossed off almost everything that I had written here so that I'll just...so that it will be quick because I don't want to really repeat anything. One thing I do want you to know, Senator Carlson, is that the League of Women Voters did support the ballot measure last fall to extend term limits and we also were disappointed that it failed. I just want to say that it's...we are in support of LB567, the League is. And we feel it is important that we have this conversation and we...I have...listening to the testimony there was plenty to worry about, but there were also some positive signs too. And so I think that it is possible to engage in creative, productive conversation about this idea, about this notion, this bill. And so I hope that you will do that. And I do hope that you will advance this bill this year. Thank you. [LB567]

SENATOR CARLSON: Okay. Thank you. Any questions? Thank you. Ken. [LB567]

KEN WINSTON: (Exhibit 16) Good afternoon, Chairman Carlson, members of the Natural Resources Committee. My name is Ken Winston, K-e-n W-i-n-s-t-o-n, appearing on behalf of the Nebraska Sierra Club. And I will not read my testimony. But there are a couple of things I wanted to emphasize. There are a couple of provisions of the bill that...one provision is water usage and another provision is the cost of purchasing fuel from out of state. Water is an extremely important issue for the state of Nebraska. The vast majority of water is used by agriculture, and it provides a huge economic benefit for the state. However, traditional energy generation requires millions of gallons of water daily in order to operate. The typical 500 megawatt coal plant uses 300 million gallons of water a day for cooling. Demand for water for agriculture is expected to increase markedly in the next 35 years. The drought of 2012 provided a vivid demonstration of the demands of water with some irrigators being forced to curtail pumping during the hottest and driest weather. We cannot afford to take water out of circulation for energy

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generation when it may have a more productive use for our society and our economy. Wind and solar do not require water to generate electricity and, therefore, would provide additional benefits to the state of Nebraska. Also wanted to address briefly the amount of money, and I don't have the most recent figures, but 2009 Nebraska sent \$338 million to the state of Wyoming in order to purchase coal. We believe that Nebraska ratepayers would benefit if these dollars were kept in our state. And then we also are concerned about rate increases. And I've been following the rate increases over the last few years and I didn't catch Duane Hovorka's testimony, but there have been some rather marked rate increases, mostly due to the fact there have been increases in the cost of coal and we're no longer in the top 10 among lowest power rates. And I guess one of the things that I've noticed is that we're lagging behind some of the states that do have more wind in their portfolio, more renewable generation than we do. And wind, solar, and efficiency are good investments and help keep rates low. So for those reasons we would ask that LB567 be advanced, or to the extent there's studies being conducted, we'd be glad to be involved with those. [LB567]

SENATOR CARLSON: Okay, thank you. Questions? Senator Smith. [LB567]

SENATOR SMITH: Thank you, Senator Carlson. Mr. Winston, thank you. What states are we lagging behind in? [LB567]

KEN WINSTON: I don't have the chart in front of me, but I... [LB567]

SENATOR SMITH: Any regional states, do you think? [LB567]

KEN WINSTON: Iowa. [LB567]

SENATOR SMITH: Iowa. And is that in residential or just across the board? [LB567]

KEN WINSTON: I believe that was overall that we were... [LB567]

SENATOR SMITH: Overall. [LB567]

KEN WINSTON: And I've seen some figures for MidAmerican, which is the one that's right across the river from where I live. And I'm in the OPPD district and MidAmerican's residential rates that I saw most recently were lower than the rate I'm paying. [LB567]

SENATOR SMITH: Residential rates, okay. [LB567]

KEN WINSTON: Right. [LB567]

SENATOR SMITH: Thank you. [LB567]

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KEN WINSTON: Thank you. [LB567]

SENATOR CARLSON: Okay. Any other questions? Thank you, Ken. [LB567]

KEN WINSTON: Thank you. [LB567]

SENATOR CARLSON: Okay. [LB567]

KEN WINSTON: And I guess, well, no, I won't say anything more. [LB567]

SENATOR CARLSON: Okay. [LB567]

KEN WINSTON: I know you're...it's late, and I'll just (inaudible). [LB567]

CHELSEA JOHNSON: Hello. My name is Chelsea Johnson. I am student at Nebraska Wesleyan University. [LB567]

SENATOR CARLSON: Do you want to spell your name? [LB567]

CHELSEA JOHNSON: Oh, sorry. C-h-e-l-s-e-a J-o-h-n-s-o-n. And I am testifying in support of this bill because I am graduating in May. And I became passionate about the topic of renewable energy my freshman year. And throughout my college career I've spent as much time as possible learning more about it and advocating for renewable energy in Nebraska with my fellow students. And one thing from my experience that just keeps on coming over and over again is that the young people that I talk to see this as a no-brainer. They see that, you know, there's windmills all over Iowa, but there's not in Nebraska and we could have that, and we could have that development. And we aren't exploiting our resources that we have to the point that we could. And I mentioned that I spent a lot of time learning about this, and one of the research projects that I did, one of the theories was that one of the main hindrances to developing renewable energy was that these externality factors that are being addressed by this bill of the health impacts, the environmental costs, that not being taken into account is really hindering the development of renewables. And when I look into my future and what I want to do, I want to come back to Nebraska and I want to live here. And when I make that decision to come back, I'm not going to be thinking about, like, my utility costs for the next ten years. I'm going to be looking at the quality of life I can have in Nebraska. And one of those things is, you know, the health of myself and my family; how much water resources there are. And I think, at least, taking those things into consideration when making decisions about what type of electricity generation is going to be in the state is reasonable and makes sense and is something that other young people want too. So that's my testimony. Thank you. [LB567]

SENATOR CARLSON: Okay, all right, thank you. Any questions? Yes, Senator Brasch.

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[LB567]

SENATOR BRASCH: Thank you, Mr. Chairman. And thank you, Chelsea, for your testimony and coming here today and your vision for the future and a spokesperson as young people you were saying. I've made an observation. Do you feel comfortable, do you drink most of your water out of the tap, or do you buy it out of the bottle? [LB567]

CHELSEA JOHNSON: I drink out of the tap. [LB567]

SENATOR BRASCH: Out of the tap. Because I see more and more people choosing not to drink water out of the tap anymore. And so I'm just wondering if confidence level in drinking water is changing as well, you know, for health purposes, or is it just... [LB567]

CHELSEA JOHNSON: I think it is. I definitely am on...a lot of the friends I have, they don't want to drink it out of the tap. I guess I...I still do. But if there came a time when I thought that I couldn't, then...I mean, that would really stink. (Laughter) [LB567]

SENATOR BRASCH: And then...like you're talking about health too. And I...I'm listening very intently here, because there is a lot to consider. But I was talking with someone yesterday, also very alarmed. They're not going to use their cell phone, only in emergency, because they saw a medical show now that's linking strong ties to cancer. Do you use a cell phone? [LB567]

CHELSEA JOHNSON: Yeah. But with this issue, with health impacts, I got the opportunity to be in Washington, D.C., for a semester internship program. And one thing that I didn't realize before going out there is that the American Lung Association is very much for restrictions on coal-fired power plants. And I found that out because like everyday as I walked to Union Station to get on the Metro, there were people standing out there, like, giving me American Lung Association postcards to send in to my representative. So I know that that is a major concern with coal. As far as cell phone use, I don't really see how that relates. [LB567]

SENATOR BRASCH: And that was something that...yeah, and so I just didn't know...because I was not that in tune to cell phones being so dangerous. And so I'm just wondering what...other than driving and texting, you know, there's danger there. But, no, I thank you for your time to come here today and your being a steward of the future as far as the...our environment, but I've no other questions. Thank you. [LB567]

CHELSEA JOHNSON: Okay. Thank you. [LB567]

SENATOR CARLSON: Senator Johnson. [LB567]

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SENATOR JOHNSON: I just want to make...thank you, Senator Carlson, and thank you, Chelsea. Just a quick comment, one of the things you stated bothers me when you said, I hope to be able to come back to Nebraska. Leaving Nebraska for awhile, I assume, after college and hoping to come back, it concerns me that you won't be able to stay here your whole life. You're leaving and coming back for whatever reason. [LB567]

CHELSEA JOHNSON: Yeah, I plan on getting a master's degree in public policy and environmental affairs from Indiana University. And so that is...I mean, that's...I'm leaving to go to Indiana. [LB567]

SENATOR JOHNSON: You'll be back right after that? (Laughter) [LB567]

CHELSEA JOHNSON: I don't know for sure if it will be right after, but...(laughter), eventually I hope to be back. [LB567]

SENATOR JOHNSON: That's all. Thank you. [LB567]

CHELSEA JOHNSON: Yep. [LB567]

SENATOR CARLSON: Might it have something to do with who you could meet out in Indiana? (Laughter) Now I'm not through yet, I'm not through yet. [LB567]

CHELSEA JOHNSON: Okay. [LB567]

SENATOR CARLSON: No, thank you for coming. [LB567]

CHELSEA JOHNSON: All right. Thanks. [LB567]

SENATOR CARLSON: You made a statement early, and I didn't catch the word. You said, we are not "something" our natural resources. And I don't know if you said we're not exploring; we're not exporting; or we're not exploiting? [LB567]

CHELSEA JOHNSON: Oh, I said exploiting. But exploring works too, I guess. Basically, I just meant, you know, we're not... [LB567]

SENATOR CARLSON: Well, if we're not... [LB567]

CHELSEA JOHNSON: ...we're not fully utilizing the resources that we have, that we have the potential to. [LB567]

SENATOR CARLSON: Okay, we're probably not exploring as much as you think we should. [LB567]

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CHELSEA JOHNSON: Yeah. [LB567]

SENATOR CARLSON: If we're not exploiting them, that's a good thing. [LB567]

CHELSEA JOHNSON: Well, or exploiting them for the benefit of all. [LB567]

SENATOR CARLSON: Okay, okay, all right, okay. Thank you for your testimony. [LB567]

CHELSEA JOHNSON: Thanks. [LB567]

SENATOR CARLSON: (Exhibits 17-20) Is that it on proponents? Okay, we have letters for the record in support: Bruce Kennedy of the Wachiska Audubon Society; Karen and Bruce Garver from Omaha; Rita Corell from Omaha; John Hansen from Farmers Union. Okay, we're ready for opponents. Welcome. [LB567]

RUSS BAKER: (Exhibit 21) Good afternoon. Chairman Carlson and members of the Natural Resources Committee, thank you for allowing me to testify before you today. For the record, my name is Russ Baker, and that's spelled R-u-s-s B-a-k-e-r. I'm the manager of environmental and regulatory affairs at Omaha Public Power District, and I am testifying today on behalf of the Nebraska Power Association, in opposition to LB567. The Nebraska Power Association is a voluntary organization representing all segments of Nebraska's power industry: municipalities; public power districts; public power and irrigation districts; and cooperatives which are engaged in generation, transmission, or distribution of electricity within our state. LB567 would fundamentally change the functions of the Nebraska Power Review Board and require it to consider additional aspects of a proposed facility that the Nebraska Power Association feels are best addressed by others. The electric utility industry is one of the most, if not the most, regulated industries in the United States. The Federal Energy Regulatory Commission handles federal regulations of the energy sector relating to interstate transmission, regional transmission organizations, most wholesale power transactions, and many hydropower facilities. Most environmental matters are regulated by the Environmental Protection Agency, federal land agencies such as the Bureau of Land Management, and other federal bodies. On a state level, the Nebraska Department of Environmental Quality oversees the protection of Nebraska's air, land, and water resources, much of it being done under the authority of the EPA. When the EPA establishes regulatory standards, they are based on extensive investigation of the impacts and particular regulated activities and are designed to protect public health and safety. It does not make sense to have the Power Review Board substitute its judgment for the expertise of the state and federal environmental regulators who impose environmental requirements for electric power facilities. It should also be noted that environmental standards can become more stringent based on new information and technologies. For instance, National Ambient Air Quality Standards are reviewed and updated every five

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years. The standards for particulate matter and sulfur dioxide have recently been reviewed and revised lower. The standard for ozone is currently under review and is expected to be lowered in the coming months. Proposed power facilities must undergo a lengthy, public process to obtain permits to be constructed and operated. This includes permits for the use of surface and groundwater at facilities. The Department of Natural Resources has jurisdiction over matters pertaining to surface water rights for storage, irrigation, hydropower, manufacturing, diversions, instream flows, and other beneficial uses. Anyone wishing to divert the waters of a natural stream or lake must first obtain a permit or water right from the department. Any entity needing groundwater permits would need to work with the local natural resource districts. The regulations and standards are developed by agencies with the knowledge, skills, and expertise to analyze impacts. Permits are required and, as part of the permitting process, substantial information is provided to the agencies to ascertain the health and environmental impact, water use, consumption and quality, and economic impacts. Hearings and public notifications are routinely required, and the comments collected during this process must be considered before a permit is approved. Additionally, as part of the federal government rule-making process, agencies must prepare regulatory impact analyses on all major regulations. A regulatory impact analysis assesses the analytical results of studies conducted during a regulations development. Each regulatory impact analysis calculates the benefits and costs of a proposed regulation's full range of effects and should compare them with those of other regulatory and nonregulatory approaches. For environmental regulations, this range extends from the release of pollutants to their ultimate effects on humans and the environment. A "major rule," as it relates to a regulatory impact analysis, means any regulation that is likely to result in (1) an annual effect on the economy of \$100 million or more; (2) a major increase in costs or prices for consumers, individual industries, federal, state, or local government agencies, or geographic regions; or (3) significant adverse effects on competition, employment, investment, productivity, innovation, and on the ability of the United States-based enterprises to compete with foreign-based enterprises in domestic or export markets. We are concerned the proposed requirements of LB567 would be extremely expensive to perform. For example, what evidence would be required to establish the projected healthcare costs of a combined-cycle natural gas plant? Would it require a plant-specific analysis with air models and health experts projecting the impact of these emissions? EPA has already made these assessments on a generic basis in setting the regulations. We believe any attempt by the Power Review Board to independently make these assessments is unnecessary. The NPA believes the intended goal of LB567 has been achieved through the many regulatory reviews and permitting processes already in place. Moreover, the agencies responsible with jurisdictional authority have the knowledge, skills, and expertise to determine the impact of a facility on the local community and the environment. Thank you for the opportunity to share our concerns, and I would be happy to answer any questions that you might have for me. [LB567]

SENATOR CARLSON: Okay, thank you for your testimony. Senator Johnson. [LB567]

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SENATOR JOHNSON: Thank you, Senator Carlson. Thank you, Mr. Baker. I spent all of 2012 campaigning for this job, and one of the things I heard almost daily is being overregulated. And I do know that the perception of the EPA, even when I was in business, that they did not always have all the best knowledge, maybe, at least that was their perception. I think we've got quite an education process in order for continuing to let them be the authority to recommend. I'm not sure if LB567 can be an alternate to that or what. But I think we've got a ways to go in order to accept some of the regulations that have been imposed, whether it's...in any industry. [LB567]

RUSS BAKER: Um-hum. [LB567]

SENATOR JOHNSON: It's not just this industry. Well, I guess that's my comment. I don't know if you have any reflection on it. [LB567]

RUSS BAKER: Well, thank you for the comment, Senator. I think, in the industry we would tend to agree, too, and our focus when regulations are coming out at that point would be on providing the kind of comments and insight to EPA to help them make better decisions when they're formulating those regulations. So we do play a part in that process, and then also working on the state and local level to make sure that everybody understands what the impacts of our facilities are going to be within the state of Nebraska as well. [LB567]

SENATOR JOHNSON: Thank you. [LB567]

SENATOR CARLSON: Senator Smith. [LB567]

SENATOR SMITH: Thank you, Senator Carlson. Mr. Baker, thank you for your testimony, appreciate it. You know, one of the benefits that we have of public power, and we've heard about it quite a bit in this committee, is that it's accountable and it's responsive to the consumer, and that's because the boards are made up by elected officials. And from what you're describing to me, the process you go through and in assessing emissions on your power plants, constructing new power plants and whatnot, you try to be mindful of that, and you have public hearings where the public is involved and engaged. Now with this particular bill, it would give the responsibility to an appointed board, the Power Review Board, which I think some could argue would be less accountable and perhaps less responsive than elected officials at the local level. So that's a particular concern I have. I'll let you comment on that, and then I have another question for you. [LB567]

RUSS BAKER: I don't disagree with you with that either, Senator Smith. They are appointed. They're not elected. And we are accountable, as a public power company, to our elected boards, and then working through, again, what we would think would be a



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redundant and unnecessary group or committee that would then also be evaluating those impacts, may or may not be qualified. I can't pass judgment on the expertise of the people that are appointed in that capacity. But we've kind of already done that when we were working with the federal EPA or the state of Nebraska, whichever department in the state of Nebraska, through those regulations, and provided comments too. It would just add another layer of redundancy, I think, where we would then have to go and once again justify, I guess, or provide enough evidence to them to meet their needs as well. [LB567]

SENATOR SMITH: So just in case anyone from the Power Review Board is listening, we have a great Power Review Board. [LB567]

RUSS BAKER: We do indeed, we do indeed. [LB567]

SENATOR SMITH: But the point I'm making is they are appointed; they're not elected. And that's one of the things we have with our public power officials, our governance there, is that they are elected, they're representative of the people and, by golly, they're going to listen to the people or they're going to lose the next election, and there will be someone in there that will listen to the people. [LB567]

RUSS BAKER: Yes, sir. [LB567]

SENATOR SMITH: Tell me a little bit about, and this may be a little bit out of your area of expertise, but the increasing cost of coal. Is it just the transport cost? What's driving the shrinking competitiveness of coal? [LB567]

RUSS BAKER: Again, that's...it is not my area of expertise. I don't work with the fuels or purchase the fuels. I'm kind of on the perimeter of that. I can say--and I can find out the direct answer to your question to meet your needs--I understand transportation costs have went up quite dramatically over the last couple of years, and I know that factors in greatly too. I don't know what the other impacts would be on those specific suppliers of the coal,... [LB567]

SENATOR SMITH: Would you say your... [LB567]

RUSS BAKER: ...if they're seeing a need in the market to raise those prices. I know that there is some variability in that as well. But I think a big chunk of it is transportation cost. Again, I can find out and get you exact information. [LB567]

SENATOR SMITH: And regulations, would that be driving it up at all? [LB567]

RUSS BAKER: Pardon me, sir? [LB567]

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SENATOR SMITH: Regulations from the EPA, is that...? [LB567]

RUSS BAKER: Oh, no doubt, regulations are increasing the cost, I think, across the full spectrum because they're regulated, the transportation is regulated, and then the industry that's receiving, you know, that raw material is also regulated, too, and it just...it's adding the price up all the way around. [LB567]

SENATOR SMITH: Okay, thank you, appreciate it. [LB567]

SENATOR CARLSON: Thank you. Any other questions? First of all, I'm going to make a comment. You went a little bit past the red light, and I didn't stop you because you sat through 18 proponents and I thought you had...should have the opportunity to finish your statement. Who makes up the Nebraska Power Association? [LB567]

RUSS BAKER: All the utilities in the state of Nebraska. It's a voluntary organization--Nebraska Public Power District, Omaha Public Power District, Lincoln Electric System, Grand Island Utilities, Fremont Utilities, Hastings. The list would go on and on and on and include municipalities, etcetera, and land and irrigation districts. [LB567]

SENATOR CARLSON: Well, does it operate as a board, or are there more representatives from NPPD and OPPD and LES than some of the others, or who is a part...who, as individuals, are part of the Nebraska Power Association? [LB567]

RUSS BAKER: I...well, you know, I can't speak to the totality of...on the upper levels of the Nebraska Power Association. I know OPPD, NPPD, all of the major utilities are members of the environmental committee, which is what I'm a part of, and that's one of the reasons why I'm here today testifying before you. Some of the other areas, I've got to admit, I'm not as familiar with, with some of the other committees. [LB567]

SENATOR CARLSON: How is the environmental committee determined? [LB567]

RUSS BAKER: Voluntarily. [LB567]

SENATOR CARLSON: Voluntarily? [LB567]

RUSS BAKER: Voluntarily. [LB567]

SENATOR CARLSON: But everybody that's on that is an elected official? [LB567]

RUSS BAKER: No, sir. Nebraska Power Association, it's voluntary. There is...it's not elected, no. [LB567]

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SENATOR CARLSON: Okay. How are decisions made on the environmental committee? [LB567]

RUSS BAKER: Consensus has been my experience. [LB567]

SENATOR CARLSON: Do you ever disagree? [LB567]

RUSS BAKER: Of course, all the time, all the time, yeah. [LB567]

SENATOR JOHNSON: It's working (inaudible). [LB567]

SENATOR CARLSON: So you have to hash things out? [LB567]

RUSS BAKER: We do; we do indeed. [LB567]

SENATOR CARLSON: All right, thank you. Any other questions? Thank you for your testimony. [LB567]

RUSS BAKER: Thank you, sir. [LB567]

SENATOR CARLSON: Um-hum. [LB567]

RUSS BAKER: Apologize for going over on the time, I do. [LB567]

SENATOR CARLSON: No, you're fine, you're fine. [LB567]

RUSS BAKER: Thank you. [LB567]

SENATOR CARLSON: Welcome, at 20 minutes to 6:00. [LB567]

GARY STAUFFER: Thank you. Good evening, and thank you for your patience and, more importantly, your perseverance. This is a complex issue, and you've exhibited a high degree of sophistication and understanding. I'll try to be brief. My name is Gary Stauffer, that's G-a-r-y S-t-a-u-f-f-e-r. I'm currently the executive director/chief executive officer of NMPP Energy, and we are known as the stealth energy business in Nebraska. We actually have 200 member communities across six states. In particular, in our electric business, we have 68 full-requirement communities. We have generating assets in Iowa, Nebraska, Wyoming, South Dakota. We are the stealth energy agency, and I used to be the president of the Nebraska Power Association. I also am currently serving as the chair-elect of American Public Power Association. So, Mr. Chairman, let me answer a question before I get into it, just a quick prepared statement about NPA. It has 159 utility members--they're voluntary--that have come together decades ago to work cooperatively for the citizens and consumers of the state of Nebraska. It is an incredible

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organization. It is unlike any I've ever worked in for over four decades. They really work together to have a good outcome for the citizens. It does have a board of 16 members. Those...the boards are elected from the membership, and they meet regularly and discuss topics that are important to the industry and important to the citizenry. If there are any other questions I can answer on NPA? [LB567]

SENATOR CARLSON: All right, thank you, Gary. [LB567]

GARY STAUFFER: Okay, thank you. [LB567]

SENATOR CARLSON: Any questions of the committee? [LB567]

GARY STAUFFER: I'd like to just address LB567 for a second. [LB567]

SENATOR CARLSON: Okay. [LB567]

GARY STAUFFER: And I'd like to explain that NMPP Energy's focus is to provide electric service to our member communities at the overall lowest cost while maintaining high levels of reliability and serving as environmental stewards to our community members. We agree with the need to conduct comprehensive analysis when selecting future power supply resources to serve our members. We believe that our current processes balance those considerations. We also believe that a significant advantage of public power is that the local governing body has the opportunity and the obligation to weigh intangible and unquantifiable factors related to these types of decisions. We oppose the bill as proposed because it sets vague standards that will be subject to a wide range of interpretation and, likely, litigation. It is redundant to the current permitting processes and jurisdiction already in place and will require significant additional expenditures by both the electric industry and the Power Review Board without foreseeable value to our consumers. I'd be happy to answer any questions. [LB567]

SENATOR CARLSON: All right, thank you. Questions? Senator Smith. [LB567]

SENATOR SMITH: Thank you, Senator Carlson. And, Mr. Stauffer, thank you for coming and testifying. So with NMPP you feel like you have practices and processes in place to address some of the environmental and economical concerns that you heard expressed here by some of the proponents of the bill? [LB567]

GARY STAUFFER: Yes. You know, I've been here all afternoon and listened to some very compelling testimony of the proponents. Clearly, the health issues that have been discussed, environmental impacts that have been discussed, are concerns to us too. We live on this planet. We share this planet. We, in the industry, have tried to do our level best to improve consistently in the reliability, the supply, and environmental stewardship. And to the degree that technology exists to help us with problems that

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have been identified, we employ those. In my organization we have 232 megawatts of fossil-fired generation; 176 of those are compliant with every regulation on the books today, including the most stringent in terms of mercury capture. And when it comes to CO<sub>2</sub>, which was discussed at some length, I've been on the American Public Power Association's Climate Change Task Force since its inception seven years ago, and there is no doubt in my mind that we have a serious problem. The issue is we have no existing technology to capture CO<sub>2</sub> and store it at the scale that is necessary to make a difference. And we do have technologies relative to some of the pollutants that have been discussed, some of the particulates, and we are employing those. Also, the older coal-fired power plants in the United States, there's 881,000 megawatts of installed capacity. About 75,000 megawatts have been retired in the last two years from the older coal-fired power plants because they simply can't meet the environmental requirements. So I will not go on about this, but we share the concerns that have been expressed. We're doing the best we absolutely can, given the balance that's required to make sure that our energy is reliable. Now the definition of energy is pretty simple. It's the ability to do work, and our society needs to do work. We need to power society with reliable electricity, and we need to balance it with affordability. And importantly, as we go forward, as citizens of Nebraska, citizens of the United States and, importantly, global citizens, we have to solve the kind of problems that have been discussed today. The simple answer is: We don't have all the solutions; we're working at it. [LB567]

SENATOR SMITH: And one final question. You say you're chairman-elect of American Electric Power, which is out of Ohio. Is that what I...did I... [LB567]

GARY STAUFFER: No, American Public Power Association. [LB567]

SENATOR SMITH: Oh, I'm sorry, American Public Power, okay. [LB567]

GARY STAUFFER: I wish I was chairman-elect of AEP. (Laugh) [LB567]

SENATOR SMITH: Okay, so I misunderstood you, because that would be quite a jump. But what's your experience with the responsiveness and the accountability of public power to be able to address these issues locally? [LB567]

GARY STAUFFER: Senator, thank you for that question. I spent...I've been very fortunate. I'm in my 46th year of employment, and I've spent half of that in investor-owned utilities, some very small utilities to some very large utilities. I've worked in North America. I've worked in Europe and in Africa, and I came to Nebraska ten years as the first experience in public power, and I can tell you it is, by far, the best formula that's ever been created. It's the purest, most simple, most accountable of any system that works out there. I've worked with state-owned utilities. I've worked with investor-owned and now in public power and, believe me, it is the clearest. And Nebraska is the best example of public power. Rates are low and affordable. Now some

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of the discussions about wind and the use of wind, I would point out that in the public domain, public power, we can only deal with cost. We have no incentives. We don't pay federal income tax. So to balance the playing field, investor-owned utilities are given many incentives that we can't take advantage of. Much of the 4,000 megawatts of installed wind capacity in Iowa is simply because it's in the shareholders' best interest to get the direct tax deductions, get it included in rate base, and then be able to market any excess, beyond what their core requirements are, into the market. It is a shareholder-beneficial program. In Nebraska we've got great wind, but we have to take a look at what that costs and how it balances out the affordability. So there...it's a completely different environment, and thank goodness I'm finishing up my career with a white hat. [LB567]

SENATOR SMITH: Well, I think you cleared it up very well there at the end, so thank you very much, appreciate it. [LB567]

GARY STAUFFER: Thank you. [LB567]

SENATOR CARLSON: Thank you. Any other questions? Senator Johnson. [LB567]

SENATOR JOHNSON: Well, I just thought...you understand the intent of what the bill is trying to do. It's vaguely written. [LB567]

GARY STAUFFER: Yes. [LB567]

SENATOR JOHNSON: If we take off that it is a bill and that it is a process and maybe this ends up being the...a study, do you feel that the issues that are presented here, with the health costs and all of the factors of...that would go into the study, that we will benefit from having a study working with your group and the opponents and the pro? [LB567]

GARY STAUFFER: The issue is complex and never ending, and it's worthy of study. I think it's up to the individual senators to determine if that study is worthy of the cost. I think you've heard from the previous testifier than an awful lot of these situations are already dealt with elsewhere. I'm certainly open to the idea that the externalities relative to electric generation need to be discussed and thought through. I'm not sure I would endorse another legislative study to do that. There are lots of forms. And, more importantly, at our local level our communities decide what's right for them relative to the environment, so there's a lot of these discussions that go on at the grass roots that get the job done. [LB567]

SENATOR JOHNSON: Thank you. [LB567]

SENATOR CARLSON: Okay, thank you. Any other questions? Okay, Gary, thank you

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for being here. [LB567]

GARY STAUFFER: Okay, thank you. [LB567]

SENATOR CARLSON: Any other opponent? [LB567]

MARK WELSCH: Neutral. [LB567]

SENATOR CARLSON: We have a testifier in the neutral position. Welcome. [LB567]

MARK WELSCH: Thank you, Senator. My name is Mark Welsch, M-a-r-k W-e-l-s-c-h. I was not planning on testifying today until I heard something that made me think that somebody is here trying to promote carbon sequestration from a coal power plant. That's absolutely the wrong thing to do. I'm almost here to testify against this bill because it doesn't go far enough fast enough. I think we need to take action now, today. We need to tell our utilities in this state that, you need to get off of carbon as fast as humanly possible, within the next 10, 15 years, because of global warming, climate change. It's going to ruin my family's farm if we don't do that. They don't...you know, they raise some wheat, but I don't think they want to raise only wheat. I don't think they want to raise cotton. They want to raise corn, like they have been, and soybeans, which has been the bread of this state for generations. If we don't take fast action quickly, if this Unicameral does not take action quickly, forcing our public power companies, which I am an owner of, which we are all owners of, if we don't force them to take action quickly, our farming and ranching industry is going down the tubes. We're dryland farmers like you. And there's not enough water in the Ogallala Aquifer to sustain us if we don't stop the heat from rising. Corn won't pollinate in hot weather. By the end of the century, it's going to be 8 degrees warmer. There are going to be years where we don't grow corn at all. So thank you. [LB567]

SENATOR CARLSON: Okay, now wait a minute, wait a minute. [LB567]

MARK WELSCH: Oh, sorry. [LB567]

SENATOR CARLSON: Thank you. Any questions? All right, let me clarify if I heard you right. You came in neutral. But if LB567 would get rid of coal-fired generation in six months, you'd have been a positive testifier? [LB567]

MARK WELSCH: Oh, absolutely. [LB567]

SENATOR CARLSON: Okay, all right. [LB567]

MARK WELSCH: Yes. [LB567]

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SENATOR CARLSON: I've got you categorized right. [LB567]

MARK WELSCH: Yes, okay. [LB567]

SENATOR CARLSON: Okay, thank you, Mark. [LB567]

MARK WELSCH: That, and I checked both. I guess I should really check all of these. I'm a proponent, opponent, and neutral. (Laughter) [LB567]

SENATOR CARLSON: Okay, all right, all right. [LB567]

SENATOR JOHNSON: Get something done, huh? [LB567]

SENATOR CARLSON: Well, we understand. [LB567]

MARK WELSCH: So here, I'll check one more. [LB567]

SENATOR CARLSON: (Exhibits 22 and 23) Okay, thank you. Anyone else in the neutral position? All right, seeing none, Senator Haar. And we do have two letters from the neutral position: one from Jim Stimpson of the University of Nebraska Med Center; and Alan Kolok of Omaha. [LB567]

SENATOR HAAR: Thank you very much. Senator Carlson, you're wise not to let me sit up here and ask questions, or we'd have been up here until 8:00, I think. It raises a lot of questions. I gave you a handout with a little elephant on the front, and quickly I want to show you some of these other pages. I'm not going to spend much time discussing them. "Securing Nebraska's Energy and Economic Future," that's Skip Laitner, who was here last week. Unfortunately, he couldn't be here today, the international expert, really, now. And if you simply look at his conclusions, why wouldn't we pay more attention to the potential for economic development? Then there is a page called "Nebraska's Dependence on Imported Coal," and I added the little box there. And this is one of the things that actually kind of gripes me. Thanks to the severance tax we pay on Wyoming coal, Wyoming residents pay no income tax and a lower sales tax. We...so if it's surface coal, and most of it is, and we import \$200 million, that's a lot of money that we pay in severance tax to Wyoming. The next page shows our wind potential ranking, three graphs. First of all is our wind potential, and this was as reported April 2012, and then the percent of wind penetration. And you notice that the only state around us is Kansas with more wind potential, but we rank down there with Missouri in terms of using that wind. And then here are some of the comparative rates. It shows NPPD and then MidAmerican and several other rates, one in Missouri and one in Wyoming, where wind has a high penetration. And finally, and I'll kind of keep you up to date on this, I love working with graphs, and there is a site called the EIA, the Energy...what is it now? It's a government agency that reports all kinds of things. If you want to know anything about



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energy, how much coal anybody imports, what the cost of it is, or whatever, you can look out at the EIA Web site. It's a government Web site. Now every month they post a year-to-date position in the United States, and it changes month by month, by the way. And so in December, we're a little bit lower in terms of overall and so on, but I just didn't have time to get...I want to give you three months--October, November, and December-- so you can see how these fluctuates. But this shows, year to date, November of 2012 compared to 2011; 2011, we were 12th at this point in...at the end of November, and November 2012 we were 15th lowest. Residential: 11th lowest in 2011, yeah, and in November 2012 we were 14th lowest. And I will also give you the data so you can see where Iowa fits and where Missouri fits, where all the other states fit. Kind of surprising to me, when you look at commercial and industrial, where we rank in terms of our rates. But I will give you some more information on that because it changes a little bit, month by month. By the way, drinking Lincoln's water, I was on the city council when they did that. Lincoln ought to bottle its water. It's some of the best water, the way they treat it and everything. It's silly to not fill your bottle with Lincoln tap water because it's some of the best in the country. Then we looked at all these various areas. And I do appreciate your time and, as I said, this is a working model--health costs, economic development potential, the effects of water, risk analysis, and the economic impact of obtaining fuels outside the state of Nebraska. And I guess my approach, more and more, as I sit in the Legislature is...and maybe this button is having too much effect on me. It says, Ronald Reagan, here we go again. (Laugh) Here we go again. If you remember, that's the famous phrase that Ronald Reagan used during his debate with Jimmy Carter. It ain't my problem. More and more, in government, people, and the citizens and myself included, I think we have to look at the overall picture. We can't just say, the elephant is low cost, dependable. We have to look at the cost of our electricity...has to look at the cost of health. It has to look at the economic potential. But every time we talk with public power...and they're right: Low cost, reliable, that's in the law. By the way, economic development is also in there, but it's in a different section of the law. We have to look at the whole elephant. We have to look at the whole cost. And if we don't, then we're just, it ain't my problem. And in many areas of government, we can't do that. We can't think in silos. We can't say, okay, here's your...here's my job, and I'm not going to care about the fact that, hey, there are healthcare costs. So we pay for that. You know, the thing of subsidizing, Gary Stauffer said, in Iowa electricity is being subsidized. Well, in Nebraska the cost of electricity is being subsidized by the healthcare costs that we bear, and it's subsidized in a negative way by not using our potential. One of the interesting things that came to mind...I gave you that little chart of Wyoming and how much coal we get from Wyoming and all those severance tax...I'm kind of jealous. I wish we had those kind of resources. But then it occurred to me: Wyoming is using up its resources. They're going to finally run out of coal and oil and gas, and they have a little bit of wind. But our resources in Nebraska, our wind, our water, and our agriculture potential, they just keep going on and on. And it's a thought I hadn't had before, and I wanted to share that with you. Although Wyoming is making a billion dollars a year off of their severance taxes, and I envy that, our resources are

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renewable. Our greatest resource is our water, our agricultural ability, and the wind. And I think we have to use the wind. I think we have to use our renewable resources. Eventually, Wyoming is going to run out, and we're still going to have our resources, and I think that's really neat. So I want to, you know, thank everybody. If...I hope you'll take a little time to look at the letters from the University Medical Center. And he says in the letter that we are ideally suited to assist the goals to conduct a scientifically rigorous and objective investigation into the potential health, economic, and environmental impacts. Someone has said to me at one point, well, you can't quantify the health costs. I went to a meeting, in July last, at...in Columbus or...no, no, it was Norfolk or Columbus, one of those two, where public...NPPD was talking about generation, their strategic plan for generation. And one of the reasons that, right now, is so important is long-term decisions are being made. Like, if we decide to invest \$1.5 billion at Sutherland, that's a 40-year investment. So we're not just talking about tomorrow or the next day. But when I went to that meeting, and after it was...they showed us their modeling. And I asked the question, what about the externalities, because I already knew that word. (Laugh) And I was told, we can't model the externalities, those are policy decisions. Huh. The point is, you can model healthcare costs. You can model these other externalities. And right now, when you talk to public power, they'll say, low cost, reliable. Yes. What about the other things? Because we're paying for them, and we're losing economic opportunity. It's not like the only thing we ever look at is our electric bill because, if it is, we're missing...you know, we almost ought to have a line on there that's saying how much...what's your healthcare cost per person, you know, and how much economic opportunity are we losing. That's looking at the whole elephant, and with public power we have a unique possibility to do that, to look at the whole cost. We don't have to think about the investors. We don't have to think...all we have to think about are Nebraskans and the health...not just the generation costs that we pay for, but the healthcare costs that go into that, the water usage, and all the other things we talked about. So conceptually, yes, it's very vague. But I have also had a commitment, I believe, from public power, and it may just be me sitting down with them. But we hope to have this kind of discussion this summer, perhaps as a study, perhaps as just a discussion. And then, I hope, at that time, having more time, we can bring in...quantify some of these other costs of the elephant besides just what we see on our electric bill. So that's probably enough. So I would certainly be open to some questions. As you can tell, I feel pretty passionately. I am tired, just as you are, so. [LB567]

SENATOR CARLSON: Okay, Senator Haar. Senator Brasch. [LB567]

SENATOR BRASCH: Even though I'd love to resist asking anything,...(laugh) [LB567]

SENATOR HAAR: Oh, thank you. [LB567]

SENATOR BRASCH: And, okay, just a few comments, just...when I came in here for this legislation, what I was expecting to see in here was we want wind and other

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renewable energies to have equal time playing in the energy sandbox, but bring it in. We want in. Then I hear that coal needs an exorcism from the sandbox, (laughter) short of a pastor saying, it's the devil's doing. And then, third, I heard there's money in all these...in wind especially, you know, that, if there is such money, I think public policy for our public power district, that that would be an economic driving factor. And perhaps some of these companies that have the wherewithal and have the jobs and everything would bring those financial dollars that we don't have to spare as a state for research, energy, the...you know, why aren't they sitting in Nebraska, putting an open-for-business sign, because they know we have purple wind here? [LB567]

SENATOR HAAR: We're purple wind. (Laugh) [LB567]

SENATOR BRASCH: Yes, so that's my comments, and just...I hope that doesn't... [LB567]

SENATOR HAAR: Well, thanks for the question because...(laughter). You know, when it comes to, you know, we're purple wind and all of those kinds of things...and everybody comes in here--and we should expect that--with their own interests. So people who can develop wind are going to come in here and say, I want to make more money and stuff. We should expect that. What our job is, I think, is to be leaders. And after this same meeting of July 1, one of the board members, and I won't name names because I can't remember them, (laugh) said, you know what, if we're going to have more renewables, the state Legislature is going to have to mandate it. And this board member wanted it. And I'm not quick enough. I didn't think to say, but you're a leader, you know, lead, don't wait for us to do it. I had somebody from one of the...from the REAs, from northeast Nebraska. Again, I don't remember the name. But he said, why don't you mandate this so we can really get going on this? And...but, you know, that's what leadership is about at all these levels, and that's why I think, as leaders at this level, I wanted to bring this, saying, hey, people, I think, are tired. Citizens are tired of saying...of hearing this group of government, this one, this one, saying, hey, that ain't my problem, that's somebody else's, you know. Well, I think, in our leadership role, we have a responsibility to look at whole issues. So, you know, that's kind of the way...and the whole thing of evil, I didn't hear that from her. But I don't think, at least I don't...I just have to speak for myself. I have no concept that we could just flip a switch and get out of fossil fuels. [LB567]

SENATOR BRASCH: Okay. [LB567]

SENATOR HAAR: If we could, I would. But we can't. I understand that. But we're at a very important point. When you're considering investing \$1.5 billion in Sutherland or a billion...whatever it is, I can't deal with those numbers, they're too big, but investing that much money, then we have to say, now, wait, is that is good investment for 40 years, or should we look at renewables, you know, as phasing in renewables. And then I have to look at this graph and say, if we have the fourth-greatest wind potential in this country

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but we're way down here with Missouri in developing it, what's wrong there, you know. So those are the kind of questions I ask and I think we need to ask ourselves as leaders. [LB567]

SENATOR BRASCH: Thank you. [LB567]

SENATOR CARLSON: Okay. Senator Smith. [LB567]

SENATOR SMITH: Yes, thank you, Senator Carlson. And, Senator Haar, in terms of mandating, I don't like mandates. But I think our public power companies have actually imposed self-mandates on themselves on renewable targets. So I think that's already happening in Nebraska, and it's happening from an elected, you know,...the boards of these...of the public power companies, elected boards of the public power companies. So to me, that's demonstrating that they are trying to find that balanced approach. And I'm a little bit nervous when we take the authority away from our locally elected boards and put it in the hands of appointed Power Review Board. And I understand that you're disappointed in the way they are seeking to meet their obligations, long term, and their expenditures for their power plants. I mean, you're not always going to get your way. I'm not always going to get my way. And so we have people in these positions to make these decisions, and they're...again, they're self-mandating renewables, but they're also looking at long-term demands. And they're investing in the power plants where they see that they're going to need to do that. And so are you telling me that an appointed Power Review Board is going to be more accountable and responsible than locally elected public power boards? [LB567]

SENATOR HAAR: Um-hum, well, that's a really interesting question. Right now, the fact that we have a Power Review Board and almost every other state has a public service commission... [LB567]

SENATOR SMITH: Um-hum. [LB567]

SENATOR HAAR: And we have an elected Public Service Commission, but electricity isn't in their purview. Interesting point whether maybe these kind of decisions should go to the Public Service Commission because those people are elected on...but I'm not even saying that right now. That's just one of the thoughts I've had. I would submit to you, Senator Smith, that with 165 public power entities we have in this state, each with eight board members, that many of them simply buy and sell electricity. All they care about is the lowest cost and dependable. And I've done a little bit of research, calling a few people on these really locally elected boards, and one person said, well, nobody has ever called me. You know, that's democracy, I guess. Somebody...and the same person I started asking about energy efficiency, and they said, well, I really don't know what you're talking about. And so, yeah, sometimes I don't want to micromanage. I am not an engineer. In my next life I might be. But as policymakers, I feel, at this level, we

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can set direction, too, and we can say, why aren't we doing more wind energy. Every state around us is doing that. Now I'm not going to tell you, X public power group, how you're going to do that. But that's what I want to happen. [LB567]

SENATOR SMITH: And I think a lot of the decisions that are being made in the renewable market right now is being made by the investors and what they can get out of the deal, frankly. [LB567]

SENATOR HAAR: Um-hum. [LB567]

SENATOR SMITH: And I think we heard our last presenter or testifier, Mr. Stauffer,... [LB567]

SENATOR HAAR: Um-hum, um-hum. [LB567]

SENATOR SMITH: ...I think he summed it up very, very well. [LB567]

SENATOR HAAR: Um-hum. [LB567]

SENATOR SMITH: And I hope we were all paying attention because it really does come down to dollars and cents in the private investment sector of utility operations. [LB567]

SENATOR HAAR: Um-hum, um-hum. [LB567]

SENATOR SMITH: And they're making decisions that are the best for their shareholders. [LB567]

SENATOR HAAR: You bet. [LB567]

SENATOR SMITH: And I, you know, I think we can always improve here in Nebraska. But, by golly, I believe that our public power folks are making decisions that are in the best interest of the citizens of Nebraska, and we can hold them accountable through elections. So thank you, appreciate... [LB567]

SENATOR HAAR: Um-hum, and I would just again...and this is just my own opinion. But, you know, so many people, when I went door-to-door, didn't even know who I was, who their state senator was. One guy even said, and why should I care? [LB567]

SENATOR SMITH: And some think I'm the U.S. senator and that I'm making \$100,000 or \$400,000 or whatever they make. Yeah, I know. [LB567]

SENATOR HAAR: Well, I'm making \$100,000. (Laugh) But people, unfortunately...and if you remember use...before the session started, the Planning Committee showed us

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how many elected bodies we have compared to the national average. And, yeah, that's good because there's a lot of local control. But the bad thing is so many people have no idea who is running. [LB567]

SENATOR SMITH: Um-hum. [LB567]

SENATOR HAAR: And they have...and so I think it's okay if, at this level, we see a need for leadership, we step in, and that's where I come from, so. [LB567]

SENATOR CARLSON: Okay, any other questions? Then I'll ask you. It might be the last one. [LB567]

SENATOR HAAR: Okay. [LB567]

SENATOR CARLSON: I think it all boils down to you would like to see more renewables, and you'd like to see more wind. And it looks to me like, where we have the wind potential that we have, then this missing step of not putting a sales tax on material that goes into building a wind tower may be a missing ingredient. [LB567]

SENATOR HAAR: Um-hum. [LB567]

SENATOR CARLSON: And that might do what you want it to do without worrying about all the rest of it. [LB567]

SENATOR HAAR: Um-hum, well, if my intention...I mean, certainly I have been involved and interested and, you know, I was kind of the one that started the study that got LB1048 going and so on. Yes, I'm very interested in renewables. I think we ought to use our resources just the way we need to use our water and manage it and so on. But I am concerned, too, as I've looked into this, about the real cost of health, the real cost of healthcare, and... [LB567]

SENATOR CARLSON: All right, but then the first step is to get more wind. How do we do that? Maybe it's to... [LB567]

SENATOR HAAR: Um-hum. [LB567]

SENATOR CARLSON: ...give the sales tax exemption. [LB567]

SENATOR HAAR: Um-hum. [LB567]

SENATOR CARLSON: Then the second step, I'm hearing, is let's get rid of more and more coal-fire generation, and we've got to have something to replace it. And I don't think...we can't replace, megawatt by megawatt, coal with wind. [LB567]

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SENATOR HAAR: No. Um-hum. [LB567]

SENATOR CARLSON: And you even said, we can't get rid of fossil fuels. [LB567]

SENATOR HAAR: Not right now. [LB567]

SENATOR CARLSON: So let's do what we can do and work on what we can work on and be happy with what we can do and see where it gets us. [LB567]

SENATOR HAAR: Um-hum, um-hum. Yeah, I don't disagree with much of what you said. But, yes, I'm very interested in renewables. I think we have to look at the full cost. And there are some other areas in the Legislature, too, now, where I think we can't just look at...people talk about thinking in silos. You can't just think about a little silo of, you know, this is the role of government here. And we know there are these other costs, but we're not going to think about them. And energy is one of those where I've been going and...yeah, enough said. [LB567]

SENATOR CARLSON: Okay. [LB567]

SENATOR HAAR: And I really appreciate the time, everybody coming here, and also your attention to this. It's an important issue. [LB567]

SENATOR CARLSON: Okay, any other questions or closing comments? Okay, thank you, Senator Haar, and thank those of you that stuck with us. And we really could go on for another five hours. [LB567]

SENATOR HAAR: We could. [LB567]

SENATOR CARLSON: And then we would tie the tax hearing, but I think we won't. (Laughter) (See also Exhibit 24) [LB567]