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Natural Resources Committee
February 11, 2016

[LB1071 LB1101 CONFIRMATION]

The Committee on Natural Resources met at 1:30 p.m. on Thursday, February 11, 2016, in Room 1525 of the State Capitol, Lincoln, Nebraska, for the purpose of conducting a public hearing on LB1071, LB1101, and a gubernatorial appointment. Senators present: Ken Schilz, Chairperson; Curt Friesen, Vice Chairperson; Dan Hughes; Jerry Johnson; Rick Kolowski; Brett Lindstrom; John McCollister; and David Schnoor. Senators absent: None.

SENATOR SCHILZ: Good afternoon, everyone, and welcome to the Natural Resources Committee hearing for today. My name is Ken Schilz, I'm from Ogallala and I represent District 47. We have the committee with us today. Senator McCollister is out, probably introducing another bill in another committee. I do expect him to be back in at some point during the hearing. But we'll let everybody else go ahead and introduce themselves, starting to my far left.

SENATOR KOLOWSKI: Rick Kolowski, District 31 in southwest Omaha. Thank you.

SENATOR SCHNOOR: Dave Schnoor, District 15, Dodge County.

SENATOR MCCOLLISTER: John McCollister, District 20, central Omaha.

SENATOR SCHILZ: Fastest bill introduction ever. (Laughter)

SENATOR LINDSTROM: Brett Lindstrom, District 18, northwest Omaha.

SENATOR FRIESEN: Curt Friesen, District 34, Hamilton, Merrick, Nance, and part of Hall County.

SENATOR JOHNSON: Jerry Johnson, District 23, Saunders, Butler, and most of Colfax Counties.

SENATOR HUGHES: Dan Hughes, District 44, Chase, Dundy, Frontier, Furnas, Gosper, Harlan, Hayes, Hitchcock, Perkins, and Red Willow Counties.

SENATOR SCHILZ: Thank you, Senator Hughes. Also with us today, he does this every time, it's great, it's awesome. Also with us today, we have Barb Koehlmoos who is our committee clerk, as well as Laurie Lage, who is our committee counsel. And we have Kellie Wasikowski. Right? There we go. She's a sophomore at UNL, but she's from Omaha. And we're happy to have

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her as our page today. Today we have three items on the agenda. We have the confirmation hearing for Mr. John Arley Rundel from the Nebraska Oil and Gas Conservation Commission; LB1101 with Senator Mello, and LB1071 that's Senator Haar's bill today. If you are planning on testifying, please pick up a green sign-in sheet. It's on the table at the back of the room. And if you do not wish to testify, but would like your name entered into the official record as being present at the hearing, there's a form on the table that you can sign and this then becomes part of the official record. Please fill out the sign-in sheet before you testify. Please print, and it's important to complete the form in its entirety. When it's your turn to testify, give that sheet to our committee clerk here and that helps us keep a more accurate record. And if you do not choose to testify, you may submit comments in writing and have them read into the official record as well. If you have handouts, please make sure you have 12 copies for the pages. And they'll make sure and get those to the committee members. And when you come up to testify, please speak clearly into the microphone; tell us your name, spell both your first and last names. And then please turn off your cell phones; we don't want any distractions for the testifiers. And if you do need to take a call or need to have a discussion, we would ask you to take that discussion to the hallway to respect the testifiers and the senators that are trying to listen to the testimony. We don't allow any displays of support or opposition to a bill vocal or otherwise. So we want to make sure that once again the testifiers and senators have the ability to hear the testimony and...so we do appreciate that. We do use the light system here in the Natural Resources Committee. We give five minutes. Four minutes on the green, one minute on yellow, and then once it turns to red we would like you to sum up, finish up and then let the next testifier come on up there. So with that, the first thing on the agenda today is the confirmation hearing for John Arley Rundel. And if you would come forward and have a seat at the testifiers chair, we will get started here.

JOHN ARLEY RUNDEL: Good afternoon, Senators. Good to be here. [CONFIRMATION]

SENATOR SCHILZ: Very good. If you could just say...spell your name and then give us a little bit of your history, a little bit of your reason for wanting to serve on the Oil and Gas Conservation Commission, and then what you see as some of the things that you see out there that are going on inside the oil and gas, not only the commission, but maybe in the industry as well. [CONFIRMATION]

JOHN ARLEY RUNDEL: (Exhibit 1) Okay. Thank you, Senator. My name is John Arley Rundel, J-o-h-n A-r-l-e-y R-u-n-d-e-l. I live in Trenton, Nebraska. I've been in Trenton about 35 years now; originally from Colby, Kansas. This starts my 37th year in the oil and gas business. I'm a professional petroleum geologist. I farm; I ranch; I'm the chairman of the village of Trenton. I've done that for about 24 years. I'm fairly active in my community; member of the Lions Club. Actually, the president of the Lions Club this year. We have a small club and so we have to pass that from two or three of us every year. So, active in my church. But I've always felt that giving back to my community, to the state is a privilege. I've been very blessed. I've had a

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good career. And I think anything I can do to make the state better, my community better, I try very hard to do that. And so the Governor approached me and asked me to serve on the Oil and Gas Commission. I was honored for that. I have extensive experience in southwest Nebraska. That's where most of my practice has been in the last 30-some years. Previous to that, I worked the entire Rocky Mountains from North Dakota and Montana down into New Mexico. And so I have quite a bit of experience. I'm glad to share that expertise with the Oil and Gas Commission. We have a very good Oil and Gas Commission. I think of you senators have found through the interim studies it's run business-like. We try the very best to protect the environment at all times while we're still using our resources that we're blessed with out in southwest and the panhandle and the very southeast corner of Nebraska. The oil is very localized. It's not everywhere, but the communities that do benefit from oil and gas production are very grateful for it. And it's an integral part of the economy in Trenton, McCook, Sidney, Kimball, Scottsbluff, down in Richardson County. Most people benefit from jobs, tax base, royalty owners, it's just a good thing all the way around and it can be done responsibly without damaging the environment and creating value. I see that sometimes the oil and gas is falling out of favor, but it's an integral part of our economy in Nebraska. And I think it can be done efficiently and carefully, protecting all...everyone's interest. And I look forward to serving on the commission to keep that going. I think we've got a good track record and I think we can build on that. I've been a member of the American Association of Petroleum Geologists for...I believe this will be my 34th year on the AAPG. It's a professional organization. Mostly it deals with scientific studies of publications, very technical, but it's kind of a benchmark for a professional association. Is there any other...education... [CONFIRMATION]

SENATOR SCHILZ: It's up to you. I think we've got a pretty good idea of what...
[CONFIRMATION]

JOHN ARLEY RUNDEL: Okay. [CONFIRMATION]

SENATOR SCHILZ: ...of your qualifications and things like that. So what we'll do now is see if there are any questions. Senator Johnson. [CONFIRMATION]

SENATOR JOHNSON: Thank you, Senator Schilz. Thank you for coming in. Thank you for your willingness to serve. The profession of geology, what's been the biggest change in that when it relates to oil and gas exploration and as the new technology or just continuing to study in order to better evaluate what, how it changes. [CONFIRMATION]

JOHN ARLEY RUNDEL: You know, it's an interesting question you pose there. As in all aspects of our lives, the computer technology and what that has enabled us to do has grown so exponentially. You can't even begin to compare what we were using for computers back in the

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1970s and '80s with what's available today. That is greatly facilitated exploration. The technology has made leaps and bounds. But still geology is part witchcraft, part black magic. (Laughter) You have to have an idea and you have to have a belief that you have an idea of where oil could be found. A computer won't do that. It will generate a very nice map; it will do a lot of things for you. But it still resides with an idea. [CONFIRMATION]

SENATOR JOHNSON: Thank you. [CONFIRMATION]

SENATOR SCHILZ: Thank you, Senator Johnson. Any other questions? Senator McCollister. [CONFIRMATION]

SENATOR McCOLLISTER: Yeah, thank you, Chairman Schilz. Mr. Rundel, thank you for appearing and thank you for your service. Tell me a little bit about Rundel Geological Services. What kind of work do you do on in your business? [CONFIRMATION]

JOHN ARLEY RUNDEL: When, of course, I hear you senators are very aware that the oil industry is in a very depressed state right now. What my business consists of is on-site, well site geology, when that well is actually being drilled is the majority of my business. When we're out there I'm giving direction of how far to drill, whether to stop and test, interpretation of drill stem test, electric logs, that type of situation. I guess I'm either fortunate or badly timed, but I have quite a few sources of income, and so I actually don't go out looking for work very much. If I have a couple of clients that come to me and have a well, I'd be glad to deal with one, but I don't actively troll for work right now. My ranch and farm keep me pretty busy. [CONFIRMATION]

SENATOR McCOLLISTER: Thank you. So most of your work is probably in Nebraska? [CONFIRMATION]

JOHN ARLEY RUNDEL: Nebraska and Kansas. I usually don't travel very far. Usually a well like in Wyoming or North Dakota will be a longer-term commitment that will be a week and a half to two weeks to a month. And usually on our...our wells in southwest Nebraska we can drill those in three to four days. [CONFIRMATION]

SENATOR McCOLLISTER: How many feet do you typically go down? [CONFIRMATION]

JOHN ARLEY RUNDEL: In southwest Nebraska, most of our production is encountered around 4,500 feet. [CONFIRMATION]

SENATOR McCOLLISTER: Are you doing any horizontal drilling? [CONFIRMATION]

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JOHN ARLEY RUNDEL: There is none in southwest Nebraska. There is a little bit been tried up in the Panhandle, limited results. [CONFIRMATION]

SENATOR McCOLLISTER: And no fracking to speak of. [CONFIRMATION]

JOHN ARLEY RUNDEL: Our formations, the limestone is not amenable to a frack...hydraulic fracturing program. Most of your hydraulic fracturing is in a shale reservoir where it has a lot of porosity. There's a lot of porous space filled with oil, but it has very little permeability. And with the hydraulic fracturing that injects some sand and gel in order to prop open, make fractures in this rock, and so you have enhanced permeability. The oil is there, it just doesn't have any way to move out. And with the stimulation it is able to flow to the well bore. [CONFIRMATION]

SENATOR McCOLLISTER: Do you have a geology degree? Is that correct?
[CONFIRMATION]

JOHN ARLEY RUNDEL: Yes, I do. [CONFIRMATION]

SENATOR McCOLLISTER: What's the school? [CONFIRMATION]

JOHN ARLEY RUNDEL: I have my bachelor's degree from Fort Hays State University; graduate work is at Northern Illinois. [CONFIRMATION]

SENATOR McCOLLISTER: I see. Is there much drilling activity occurring now, given the low price of crude oil? [CONFIRMATION]

JOHN ARLEY RUNDEL: I believe we have one drilling...active drilling permit this week in the state of Nebraska. It's very, very reduced. [CONFIRMATION]

SENATOR McCOLLISTER: Well, thank you, Mr. Rundel. Thank you, Mr. Chairman.
[CONFIRMATION]

JOHN ARLEY RUNDEL: Thank you. [CONFIRMATION]

SENATOR SCHILZ: Thank you, Senator McCollister. Further questions? Mr. Rundel, is this your initial appointment to the Oil and Gas Commission? [CONFIRMATION]

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JOHN ARLEY RUNDEL: Initially was appointed for a six-month term to fill an unexpired term; a commissioner had to resign. And this is for a full four-year term. [CONFIRMATION]

SENATOR SCHILZ: So this is subsequent to that? [CONFIRMATION]

JOHN ARLEY RUNDEL: Yes. [CONFIRMATION]

SENATOR SCHILZ: Okay, very good. And so then you've been attending meetings and then have been involved for a number of months now? [CONFIRMATION]

JOHN ARLEY RUNDEL: Yes, since last March, almost a year now. [CONFIRMATION]

SENATOR SCHILZ: Right. And, of course, you got to witness all the stuff on the disposal well and all of that that had gone on, I presume, correct? [CONFIRMATION]

JOHN ARLEY RUNDEL: Yes, that is correct. [CONFIRMATION]

SENATOR SCHILZ: Okay. And, you know, and I know that this committee has held studies on that and has looked into it extensively as well, too. And, you know, I would just ask you as you move forward in looking at that situation and the circumstances around it, are there lessons for all of us to learn as we move forward in this process? Are there things that this Legislature needs to understand as we move forward in our attempt to find some solutions for the issues that have come up? It's kind of a wide-open question, but it's your opportunity. [CONFIRMATION]

JOHN ARLEY RUNDEL: It was a, surely, a learning experience for everyone involved. (Laughter) The Oil and Gas Commission I think has done a very good job over the year, but we've never had a lot of spotlight put on us. Most of it's fairly noncontroversial. And the worst thing is a couple of oil companies fighting over a technical thing. And so I think we were unprepared for the publicity and exposure we had. I think we've learned some lessons from that. It was a very highly emotional charged thing. I think there was quite a bit of misinformation out and a lack of understanding. And hopefully going forward that we can share that information of what is actually occurring. And there's a lot of technical terms involved. And I think we need to do a good job with trying to explain the technical aspects of these Class II wells. [CONFIRMATION]

SENATOR SCHILZ: Very good. And I can say this, in doing those studies, having the hearings, I sat in on many of the reviews...on the reviews that were going on, both with the EPA, as well as the state's first review that went on, and I was impressed. The commission has done a good job. I

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don't disagree with your assessment that you just spoke of. I think you hit it on the head and I think we're into a new age where you're just going to have to be ready for challenges and unexpected situations as we move forward. So I would...I guess it heartens me to know that you guys are thinking about how to proactively move forward to do that. And hopefully...hopefully through the introduction of the bills that we have this year, we can find some ways to both give the commission a little more authority to do some of the things that they may need to do, as well as try to find some ways to help protect the commission as well from what could be seen as baseless attacks going forward. [CONFIRMATION]

JOHN ARLEY RUNDEL: Um-hum. [CONFIRMATION]

SENATOR SCHILZ: So, with that, I appreciate it. Any other questions for Mr. Rundel? Seeing none, thank you very much. [CONFIRMATION]

JOHN ARLEY RUNDEL: Thank you, Senators. Appreciate it. [CONFIRMATION]

SENATOR SCHILZ: Very good. Yes, you're welcome. Do we have any proponents for Mr. Rundel? Proponents? Do we have any opponents? Seeing none, any neutral testimony for confirmation of Mr. Rundel? Seeing none, that will end our hearing and thank you for coming in today, Sir, we really appreciate it. Have a safe trip home. [CONFIRMATION]

JOHN ARLEY RUNDEL: I will do that. [CONFIRMATION]

SENATOR SCHILZ: And now we will move on to LB1101 from Senator Mello. And I see he's here and he's welcome to come to the testifier's table. Welcome to the Natural Resources. [LB1101]

SENATOR MELLO: (Exhibits 1 and 2) Good afternoon, Chairman Schilz, members of the Natural Resources Committee. I was just wondering where Senator Haar was since he wasn't in Appropriations Committee and here's where I find him. (Laughter) 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. I'm here to introduce LB1101 today that would direct the Department of Environmental Quality to conduct a comprehensive study examining the status of solid waste management programs operated by the department and make recommendations to modernize and consider revising these programs. Over my eight years here in the Nebraska Legislature, recycling and waste management has been an important issue to me and I've introduced several bills to this committee to start to consider addressing areas of issues. This past summer, the Omaha World-Herald revealed the critical need for examining, analyzing, and improving Nebraska's recycling and wet waste management

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policies. I've provided the committee with an article published by the World-Herald on July 12, 2015, that states that Nebraskans are currently paying about \$34 million a year in landfill fees to dispose of recyclable materials worth about \$87 million. What was highlighted by the World-Herald article was the current state of Nebraska solid waste management and recycling further, opening my eyes as to what we could be doing and what needs to be done as the state...when it comes to evaluating our existing state programs, policies, and funding streams within the Department of Environmental Quality. I believe this is an ideal opportunity for the state, particularly under a new administration, to take a hard look at the state's existing recycling, the waste management statutes, the funding streams that are paying for the waste management infrastructure, and programs across the state. Working with a number of stakeholders this fall, it was concluded that a bill should be brought to empower DEQ to conduct a statewide study of waste reduction and recycling. I brought this idea to the Department of Environmental Quality at the beginning of session to make sure that a comprehensive statewide study was the direction that they wanted to go and we developed language that they were comfortable with throughout the process. Elements of the study would include a look at whether or not existing state programs should be amended and/or merged or eliminated; a needs assessment of recycling and composting programs, including a need for infrastructure development, market development, public education, and incentives to increase recycling and composting; methods to partner with political subdivisions, private industry, and private or nonprofit organizations to effectively address waste management issues; recommendations regarding existing funding sources and possible new revenue sources at the state and local level to address existing and emerging solid waste management issues; and possible revisions to the existing grant programs to address solid waste management issues in a more proactive manner. LB1101 as drafted would also enable the Department of Environmental Quality to establish an advisory committee to assist them in regards to this study. Having an advisory committee involved in the process provides an ideal opportunity for the Department of Environmental Quality to engage stakeholders throughout the state, throughout this two-year process. Colleagues, it's been brought to my attention through some of our research that it's almost been 25 years since the Solid Waste Management Act was passed by the Legislature in the early 1990s that set goals for the state of Nebraska in regards to recycling and solid waste management. It's now 2016 and Nebraska has fallen significantly short of those stated goals. Others here today will testify to the history of the Solid Waste Management Act in our state and the importance of this statewide study. LB1101 is key to allow the Department of Environmental Quality to conduct a true comprehensive statewide study to look at what we can do as a state collectively to get more cost-effective programs and utilize more evidence-based policies in the future. With that I'd be happy to answer any questions you may have. [LB1101]

SENATOR SCHILZ: Thank you, Senator Mello. Any questions for Senator Mello? Seeing none, will you have to leave or will you stick around? [LB1101]

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SENATOR MELLO: I'm going to stick around. I probably will waive closing, but I'll stick around. [LB1101]

SENATOR SCHILZ: Okay. Thank you. Okay, we'll start with proponents for LB1101. Any proponents? Good afternoon and welcome. [LB1101]

CARRIE HAKENKAMP: (Exhibit 3) Good afternoon. Thank you for having me today, Senator Schilz, and Natural Resources Committee. I'm Carrie Hakenkamp, C-a-r-r-i-e H-a-k-e-n-k-a-m-p. And I'm the executive director of WasteCap Nebraska. We are a non-profit organization that was formed around the same time that these original waste management acts were created in the early '90s. And we work with communities and with businesses to help them to eliminate waste in Nebraska. We do that through education, innovation, and public policy change. So we have educated a number of communities around our state on ways in which they can continue to improve upon their programs in their communities. The original act did require all communities in Nebraska to have a solid waste management plan...an integrated solid waste management plan and also to set those voluntary goals. So there are now communities...at this point just Lincoln and Omaha are the only two communities who have upgraded those 20-year plans that have now expired. And we are working with communities such as Hastings and Imperial, Alliance, Broken Bow, Wayne, and Louisville on special projects to help educate them on ways that they can improve their programs to evaluate programs from all over the country to find out ways in which they can improve that, and rather than look at just solely integrated solid waste management, but to also look at sustainable resources management and sustainable materials management. We are here in support of LB1101 because it is outdated and because it focuses solely on integrated solid waste management rather than on resource conservation. And it was intended to really help build Nebraska's recycling infrastructure through the grant programs. And it has done that. We have really built a lot of infrastructure around the state. What you have there today is a study that was done in 2015. And what that has shown us is that Nebraska is lagging significantly behind our neighbors and the rest of the country. But not only that, the World-Herald article that Senator Mello mentioned shows that we are the top five in the nation, we're the fifth highest generators of waste in the nation. And we need to be looking at why that is. Why are there 45 other states ahead of Nebraska in our waste generation? We're generating seven pounds per person per day when the rest of the country is averaging four pounds per person per day. And here in Imperial, Nebraska, they have programs like a "pay as you throw" program and they have incentive programs that they created 20 years ago with the integrated solid waste management and those incentives have brought them down to two pounds per person per day. So they are far below the national average. And we believe that there are better strategies, better goals. And because we are stuck in an integrated solid waste management planning phase rather than looking at the resources and management, we're really not encouraging any of those incentives that could be there, let alone encouraging the jobs that we could be bringing to Nebraska. The study that I've given you the executive summary for, estimated that in 2013 there were over \$90 million in

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wages from recycling industries in Nebraska. And if we could do more on economic development to bring other industries to Nebraska who are utilizing those recycled content products, I think it would be a much better holistic approach. And this is a really good first step at looking at how we're funding our programs, how we're setting up those programs. Are we still doing a patchwork of programs throughout the state? And I think that that's probably the biggest concern that we as an organization have is that there is a lack of services in many areas of the state, lower population parts of the state that are also vast areas in land space. And the transportation and collection is the most expensive part of recycling. There's a lot of education that needs to happen in our state and these grants do help to fund that. And it would be just a much better approach if we could be looking at establishing a measurement system, establishing some standardized recommendations for communities. And then as we are looking at our grant programs and who we're giving money to and how we're spending that money, are we creating a unified waste management and recycling program throughout the state? Or are we continuing to do that patchwork? So we do feel like millions of dollars have gone into these grants to help our programs. And we just feel like looking at these grant programs that are now over 20 years old, looking at our integrated solid waste management systems that are over 20 years old, that there's a huge opportunity for Nebraska to move from being 45th in the nation to way further ahead in what we're doing with our waste management, how we're handling our resources, and whether or not we can use recycling here in the middle of the country as an economic development program here in the state. It makes a lot of sense with our location for transportation being 500 miles in any direction from large population centers and bringing some of those jobs back to the state. So I'd encourage you to pass this forward on to the rest of the Legislature and get this bill through so that we can start evaluating these programs and improving our programs here in the state. [LB1101]

SENATOR FRIESEN: Thank you, Ms. Hakenkamp. Are there any questions from the committee? Senator McCollister. [LB1101]

SENATOR McCOLLISTER: Yeah, thank you, Vice Chair Friesen. Thank you for appearing today. [LB1101]

CARRIE HAKENKAMP: Sure. [LB1101]

SENATOR McCOLLISTER: Remind me, if you would, I know you've appeared before this committee before I've been here, WasteCap is that a state agency or what...? [LB1101]

CARRIE HAKENKAMP: We're a nonprofit organization. [LB1101]

SENATOR McCOLLISTER: Okay, based in Lincoln. [LB1101]

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CARRIE HAKENKAMP: Based in Lincoln. And we do receive a lot of state grant dollars, both through the Waste Reduction Fund, the Litter Reduction and Recycling Fund, and the Nebraska Environmental Trust. So all of those funds have supported a lot of our efforts over the years. [LB1101]

SENATOR McCOLLISTER: I see. Interesting charts that you included with your testimony including pounds of municipal solid waste that occur in various states. And I was particularly intrigued with South Dakota, 3.8, versus Nebraska at 7.0. What kinds of strategies do they employ that Nebraskans don't? [LB1101]

CARRIE HAKENKAMP: You know, we've tried to look into that, and I don't know that the Public Policy Center when they did this study actually looked into that completely to figure that out. But I think a lot of it, again, has to do with having those strategized systems together, having a more holistic system. [LB1101]

SENATOR McCOLLISTER: I see. Do they have recycling policies or (inaudible). [LB1101]

CARRIE HAKENKAMP: They have some. I think that another part of it too is that...one of the things we found is that they are a much more rural state even than Nebraska is with Lincoln and Omaha not being rural. And we did find that in rural communities they are generating a little bit less waste. [LB1101]

SENATOR McCOLLISTER: Less waste. [LB1101]

CARRIE HAKENKAMP: Per capita. [LB1101]

SENATOR McCOLLISTER: So they don't necessarily recycle to a greater extent, they just generate less waste. [LB1101]

CARRIE HAKENKAMP: Um-hum. [LB1101]

SENATOR McCOLLISTER: I see. Well, good study. I'm anxious to see what you conclude moving forward. [LB1101]

CARRIE HAKENKAMP: Yeah, the study is great. It's got about 15 different recommendations that they've made through the Public Policy Center. [LB1101]

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SENATOR McCOLLISTER: Well, thank you, Ms. Hakenkamp. [LB1101]

CARRIE HAKENKAMP: Thank you. [LB1101]

SENATOR FRIESEN: Thank you, Senator McCollister. [LB1101]

SENATOR McCOLLISTER: Thank you, Mr. Vice Chair. [LB1101]

SENATOR FRIESEN: Senator Hughes. [LB1101]

SENATOR HUGHES: Thank you, Vice Chairman Friesen. Thank you, Ms. Hakenkamp, for coming today. I guess my question deals with once we've collected the material, is there any progress being made in how we utilize the cardboard and the newspapers and the plastic bottles? [LB1101]

CARRIE HAKENKAMP: Not necessarily in Nebraska. [LB1101]

SENATOR HUGHES: Okay, is that going to be part of this study? Or this is just about being able to collect more? [LB1101]

CARRIE HAKENKAMP: This is just being able to collect it. But I think it would eventually look also at the marketing of those materials and how do we do market development in Nebraska. [LB1101]

SENATOR HUGHES: So are...in your company, do you have any insight that you could share, maybe trends in the industry of once we collect this material, how do we turn it into cash or other products? [LB1101]

CARRIE HAKENKAMP: Um-hum. Yes. Yes, actually for our annual meeting this fall, we're trying to recruit the executive director of the Southeast Recycling Development Council, which is a group of several states in the southeast part of the country that have come together to work on economic development issues in those states through recycling. So what they have done, for instance, in North Carolina, South Carolina, Georgia, where they generate a lot...you know, Georgia is our carpet manufacturing capital of the U.S. And a lot of carpet can be made out of polyethylene. So the PET plastic number 1 bottles that you would have your sodas in, those are utilized in carpet manufacturing. So in North Carolina and South Carolina, they've actually banned those materials from their landfills so that they can collect them as feedstock to support

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the jobs that they've created through their economic development efforts. And so our hope is that we can bring these folks to Nebraska and learn from them on their programs and maybe even go to the southeast part of the country and learn from them on their programs what they've done to create jobs, to build industries, and to ensure that those industries have the proper feedstock. Our population is low enough that we wouldn't have enough feedstock to support those industries on our own, so we would have to be recruiting materials from other states around us. [LB1101]

SENATOR HUGHES: Okay, thank you. [LB1101]

SENATOR FRIESEN: Thank you, Senator Hughes. Senator Johnson. [LB1101]

SENATOR JOHNSON: Thank you, Senator Friesen. Thank you for coming in. Being involved in a relatively medium-sized community, we have agencies that collect recycling, nonprofits. Their ability to collect and make it valuable for them based on price, so there's a little bit of a disconnect there from bringing it to a recycler. We have the agencies that take that, pick it up, and do probably a better job of marketing. Then we have the groups in this community where we have the trash haulers trying to promote recycling. And the feeling is that the market isn't there or it goes to the landfill anyway. Is there a disconnect or will this study help us to coordinate better so that we have more consistency all the way through the system. [LB1101]

CARRIE HAKENKAMP: We certainly hope so. Because it is a huge system and you have to have your generators. The local government has to be involved in creating those policies and making sure that there's a collection site or someone who is collecting the materials. You have to have your collectors, your intermediate processors, and then it goes to the regular processors who then take it to the recyclers who are processing it into a feedstock, and then it goes to manufacturers. So it goes through several steps and several processes. And unfortunately right now, all of the recycling markets are low. The \$87 million that Mr. Mello referred to, in 2010, that same amount was worth \$135 million. So, you know, it's just a matter of what the markets are doing right now. And all the markets are depressed. We do live in a global marketplace. Almost all recycling is dependent on what's being purchased from China. Almost all of our recyclables are transported there. And I think that's one of the reasons that the Southeast Recycling Development Council is working to keep those products in the U.S., to create a demand for those products here in the U.S. And that is one of the biggest struggles that our local recyclers have and our local community programs have is being able to market that material at a cost that covers the cost of their programs. So part of what we're looking at with our programs in Alliance and Broken Bow are we're evaluating what their facility is, what their facility costs are, what equipment they have, how much more capacity do they have currently, how much would they need if they were to serve as a hub and service more communities and towns? And that will

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be something that we'll be looking at in Hastings as well, as they go through their zero waste planning. [LB1101]

SENATOR JOHNSON: I have another one. Okay, thank you. The landfill in David City, or Butler County, for a while they were receiving solid waste; most people call it garbage, from out of state. I hope none of those numbers are part of these numbers that's inflating our cost and throwing it out of kilter. I don't know how much of that is happening, but I know they were unloading rail cars and hauling it out there. [LB1101]

CARRIE HAKENKAMP: Um-hum. And I think that there's representatives here today that could answer that better. [LB1101]

SENATOR JOHNSON: Okay, that's fine. [LB1101]

CARRIE HAKENKAMP: I don't know for sure...one of the problems that we had when conducting the study with the Public Policy Center is that there are no rules and regulations for anyone to report data other than the landfills. So we can tell you to the pound how much waste we have, but we have no idea what we're recycling or where that's coming from. And our recyclers, as we did the study, said, you know, that's proprietor information, we can't share that with you. So there's no means for anyone to collect all of that data without changing this legislation. [LB1101]

SENATOR JOHNSON: Thank you. [LB1101]

SENATOR FRIESEN: Thank you, Senator Johnson. Senator Schnoor. [LB1101]

SENATOR SCHNOOR: Actually, Senator Johnson asked the same question I was going to ask and then your answers gave me, you know, guess I don't have any questions right now. So thank you. [LB1101]

CARRIE HAKENKAMP: Okay. [LB1101]

SENATOR FRIESEN: Okay, thank you, Senator Schnoor. Any other questions from the committee? Just a couple of questions. [LB1101]

CARRIE HAKENKAMP: Sure. [LB1101]

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SENATOR FRIESEN: Did you...do you oversee the grant program of some sort or your organization? [LB1101]

CARRIE HAKENKAMP: No. No. We are a grantee, so we receive grants from DEQ. [LB1101]

SENATOR FRIESEN: Okay. And of those...does that process work well? [LB1101]

CARRIE HAKENKAMP: It has. It was just recently modified. DEQ did look at what their priority systems were, kind of had a public process of taking recommendations and changing that. One of the recommendations that has come about was that we change what our waste management hierarchy is and look more at aligning ourselves with the rest of the nation under US EPA's waste management hierarchy and their pollution prevention. And again, we can't change that without changing this legislation. So that's where the study came from. And in looking at this LB1101 was to really evaluate, okay, do we need to look at what our waste management hierarchy is? Do we need to look at how we're funding these programs? Do we need to charge more than \$1.25 per ton at the landfill to help fund these programs? You know, we might need \$10 million to get enough balers and trailers and trucks and equipment and buildings to manage our recyclables. But where does that money come from? And it seems to make sense that evaluating these programs and how they're funded and evaluating what types of programs are funded would be the best route for doing that. [LB1101]

SENATOR FRIESEN: Okay. Seeing no other questions, thank you for your testimony. (Inaudible.) [LB1101]

CARRIE HAKENKAMP: Thank you very much for your time today. [LB1101]

SENATOR FRIESEN: Are there any other proponents? Welcome. [LB1101]

KELLY DANIELSON: Good afternoon, Senators. My name is Kelly Danielson, K-e-l-l-y D-a-n-i-e-l-s-o-n. I'm from David City, Nebraska. I'm here representing Waste Connections. And I'm a lifelong Nebraskan; I grew up in Oakland, Nebraska. And I just came here in support of LB1101. And I think I have kind of a unique perspective. My first job out of college was with the DEQ in 1990. And I was around during all the development of all these laws and rules, LB1257(d), and those. And five years later went to the private side and have been complying with those rules and regulations for the last 20 years. From my perspective, the bill was...originally LB1257 was introduced as more of a waste reduction...strictly waste reduction and conserving air space. They banned a lot of items. Obviously, there were recycling goals. Those goals weren't mandates and didn't have a lot teeth, as Carrie indicated. There was plans that were implemented or proposed,

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but with the exception of Omaha and Lincoln, recycling didn't really gain traction. And as markets go up and down, recycling would be good for a little while when the markets were up and then it would lose traction and people stopped doing it. I just feel like...like we need to kind of reboot the system and take a look at all the waste recycling goals, the laws, and, basically, the, kind of, the overall system. It's a pretty complicated system relying greatly on transportation. And I think this is a good step to take a look at that. In addition, back in the '90s or before '90s, we had 400 landfills; we're down to 23 landfills, soon to be 22. I think Sarpy County landfill is destined to close. So, you know, going forward, recycling is, obviously, number one goal, but, ultimately, you still have to have enough air space going forward to manage our ultimately what gets disposed. I just feel like the...the system has evolved and some of the regulations haven't. So that's why we're here in support of LB1101. I don't have anything else unless you have any questions. [LB1101]

SENATOR FRIESEN: Okay, thank you, Mr. Danielson. Any questions? Senator McCollister. [LB1101]

SENATOR MCCOLLISTER: Thank you, Vice Chair Friesen. Previous testifier talked about some of the economics. Can you describe the current state of economics. Is it tipping fees that are a factor, and also the value of the recyclables and how those tipping fees vary and landfills closing? It seems like there's a lot of moving parts. [LB1101]

KELLY DANIELSON: Yeah. It's really pretty complicated, but probably in a nutshell what I'll say is that landfill fees are low in Nebraska, you know, because we have lots of land versus in the eastern part of the country, and recycling costs are a little high. So it's unfortunately cheaper to throw things away than it is to recycle them. The other thing we got going against them is just the transportation. I kind of...I don't know if this is a very good analogy, but it's mine, it's kind of like trying to take corn in your pickup to the co-op, you know, it doesn't make economic sense. So if you've got a few plastic bottles in Leigh, Nebraska, and you're trying to get them to Omaha, that's expensive. And that's what needs to be studied, how to figure out a system to handle those small areas, rural areas and getting them consolidated and getting them to an economic center where they can manage those. [LB1101]

SENATOR MCCOLLISTER: Okay. Thank you. Thank you, Vice Chair. [LB1101]

SENATOR FRIESEN: Thank you, Senator McCollister. Senator Schnoor. [LB1101]

SENATOR SCHNOOR: Thank you. I guess this is kind of in reference to Senator Johnson's question earlier. But first, I guess, just to help myself at least or maybe more of us understand the

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landfill business, if you want to call it that. The one in Butler County, how big...how many acres is that? [LB1101]

KELLY DANIELSON: It's currently 88 permitted acres, I think is what it is. [LB1101]

SENATOR SCHNOOR: About 8...covers about an 80, so. [LB1101]

KELLY DANIELSON: Yeah. [LB1101]

SENATOR SCHNOOR: All right. So what is then...what is the...and I don't know if this is the right term, it's the only thing I can think of, what's the life expectancy of a landfill? I mean, how long until something like that is full? [LB1101]

KELLY DANIELSON: Well, they vary obviously. It's all footprint and then just air space. So what you...I always tell people what we sell is air space, what we charge is usually by the ton. And we do a lot of converting of air space to tons and stuff. But we currently have seven to ten years of air space in Butler County. There's, like I said, there's 23 landfills. I know Sarpy County doesn't have very much air space; Douglas County, I think, has lots. Each landfill is kind of different depending on how high their waste column is, how deep their waste is versus their footprint. There's engineering involved. [LB1101]

SENATOR SCHNOOR: How long has the one been by David City? [LB1101]

KELLY DANIELSON: Since 19...well, originally in 1986, it was a pre-Subtitle D site, it was unlined. And then it was converted to a Subtitle D site in 1992-93 time frame. So it's been there... [LB1101]

SENATOR SCHNOOR: So that's lasted much longer than the seven to ten years you referred to then. [LB1101]

KELLY DANIELSON: Well, the remaining capacity is seven to ten. [LB1101]

SENATOR SCHNOOR: Okay, all right. [LB1101]

KELLY DANIELSON: It's been there since, yeah, sorry, it's been there since 19... [LB1101]

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SENATOR SCHNOOR: Okay. All right. Okay. Thank you. So then, you know, my common sense will tell you that the more recycling you can do the longer you're going to be able to use that landfill. [LB1101]

KELLY DANIELSON: That's right. [LB1101]

SENATOR SCHNOOR: And then do you, in fact, take in waste from out of state? [LB1101]

KELLY DANIELSON: We, I think the waste that Senator Johnson was referring to was rail car loads from New York City back in...and that was in the...I was at DEQ at that time. It was in the early '90s, I believe, that was going on. And that hasn't happened since. We do take some industrial waste from the Council Bluffs market. But not really municipal solid waste from Iowa or Kansas, South Dakota, that kind of thing. [LB1101]

SENATOR SCHNOOR: Okay. All right, that's all I have. Thanks. [LB1101]

SENATOR FRIESEN: Thank you, Senator Schnoor. Any other questions from the committee? I know...there's a recycling facility in Henderson and they started out 20, 25 years ago and the markets were really good; they were recycling cardboard, glass, tin, aluminum. And slowly those markets just disappeared. And it had a lot to do with China, a lot of that was going to China at the time. So, I mean, we look at the value of it and I know the tipping fees and what they were getting per ton for cardboard, I mean, just cardboard alone was \$120 a ton at one time. And so if you're also charging a \$30 tipping fee, pretty good profit in recycling. But now those...they still do some recycling and he has a 30-foot pile of glass that he's got piled outside with nowhere to go. And he had some other commodities there too that those markets just disappeared and you couldn't even afford the freight to get rid of them. So some of it, yeah, did end up going to a landfill, some of it is just sitting around. But is that...how many pounds do you think could easily be recycled out of the stuff that you're dumping there? I mean, does it have to be done before it gets in the garbage truck? I mean, that's ideal almost. [LB1101]

KELLY DANIELSON: Yeah, the...I was hired in 1995 by the original owner to operate a dirty MRF, that was my initial job up there, and we were sorting through the waste, some of it mechanical, some of manual, and did that for a few years. And just the economics of it didn't work again. It goes back to cheap tipping fees. If you're in New York City where they're paying \$80 to \$100 a ton, there's more to work with than there is when you're charging \$20 to \$30 a ton. And it just...the economics of it didn't pan out. There's approximately 900 households in David City. We offer a curbside recycling program, Waste Connection does, and we have 50 customers. It's only an extra \$5 a month. So it kind of boils down to me is that most of the time the consumers don't really want to pay the extra cost of recycling, and we need to change that

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somehow. But if it's \$15 to \$20 to throw your trash away and an extra \$5 to recycle, there's a small percentage of people that will do that, but a majority don't. And that's unfortunate and we need to, again, I think that's, ultimately, what the study...maybe we could help figure out, you know, a better mouse trap to get some solutions to those problems. [LB1101]

SENATOR FRIESEN: Have you had access to any of the grants that they've done in the past for recycling? [LB1101]

KELLY DANIELSON: Yes, yep. [LB1101]

SENATOR FRIESEN: Has that been a good program? [LB1101]

KELLY DANIELSON: Yeah, absolutely, yep. We've had a number of things over the time we've applied for. [LB1101]

SENATOR FRIESEN: Do they ever audit any of those grants? Do they come and check to see that you're still using them, doing what you're suppose to be doing. [LB1101]

KELLY DANIELSON: Yeah, yep, absolutely. We had a little green sticker on them and they come up and check them, I think it's for...the life expectancy of the piece of equipment is seven years, five years, whatever that is. [LB1101]

SENATOR FRIESEN: Okay. Any other questions from the committee? Thank you, Mr. Danielson. [LB1101]

KELLY DANIELSON: Thank you. [LB1101]

SENATOR FRIESEN: Are there any other proponents? [LB1101]

JOHN HANSEN: Mr. Vice Chairman, members of the committee, for the record my name is John Hansen, J-o-h-n, Hansen, H-a-n-s-e-n. I'm the president of the Nebraska Farmers Union. We are in strong support of LB1101. We've been around long enough that we have been actively involved in a lot of the legislation down over the years. This issue is one that provides big challenges for larger communities, but it also provides some very...some very complicated and expensive challenges for smaller communities that we work with around the state as well. We...I very strongly associate myself and my comments with both of the previous testifiers and would tell you that we are also in a vermiculture project, so we have been working with a

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vermicomposting structure. So we've been working with the Nebraska Department of Environmental Quality. We've received two grants. We're a licensed waste hauler. So we've come to these issues with fresh eyes; looked at all of these things and are impressed with a lot of the things that DEQ is doing. But come away from our experience in a new experience in this area. Not only impressed with the expertise of WasteCap, but really...WasteCap, but really impressed with a lot of things that DEQ does and the expertise that they have. But there is a clear need, in our view, to go back and rethink how we're coordinating and what we're doing, because in a lot of cases this up and down in the market, it's a capital-intensive business. You're setting up a business and then all of a sudden your market disappears and your market will be back at some point. But what do you do with all that glass, Senator Friesen, that's piled up there. So now we're seeing all kinds of problems with glass. And so what else can we do with glass and how can we use that product. But, you know, the education and the prevention of materials in the waste stream in the first place is, obviously, needed and to expand that. But, you know, the whole pricing structure and Ms. Hakenkamp referred to that, but there's some different models out there that I think make some sense. But now there's not really much of a penalty as a consumer whether you're a recycler or whether you're not because if you're not, you're paying about the same thing and you're a recycler you're probably paying somebody else or going through some additional effort in order to recycle. So we're not rewarding the recycler. The good part is that we've got some really excellent waste haulers in the state. And they work hard and they're efficient and they're creative. Not only are they, I think, very much interested in trying to help expand and coordinate their role in recycling, but the consuming public is ahead of where we're at right now, I think, as a state. I think that folks are...you know, you go to events now and people want to know where to put their recyclable container. And there's just a whole lot of interest. If we can try to help do a better job of creating the infrastructure to be able to take advantage of the public support that there is, and in all of these things an ounce of prevention is worth a pound of cure. And so the more kind of coordination we can do and the more efficient we can do about trying to hook some things together so that it works so that we're doing a better job of hauling our pickup loads of corn to the market, as the previous testifier, I think that was a great analogy. But at some point we have the opportunity in our state when you look at what some of the other states are doing. I think it's time for a relook and I think we've got a lot of bright, talented folks in this area who are wanting to move forward. And so we support LB1101 and thank Senator Mello for bringing this bill forward. [LB1101]

SENATOR FRIESEN: Thank you, Mr. Hansen. Any questions from the committee? Seeing none, thank you for your testimony. [LB1101]

JOHN HANSEN: You bet. Thank you. [LB1101]

SENATOR FRIESEN: (Exhibits 4, 5, 6, and 7) Any other proponents? Seeing none, we have some letters of support from the Deb Rost from Nebraska State Recycling Association; Gene

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Hanlon, Lincoln; Gary Krumland from the League of Nebraska Municipalities; and Frank Uhlarik from the city of Lincoln. Are there any who wish to testify in opposition? Seeing none, is there anyone willing to testify in a neutral capacity? Welcome. [LB1101]

RICHARD YODER: (Exhibits 8 and 9) Thank you. Now I made personalized gifts. My name is Richard Yoder, Rick Yoder, R-i-c-k Y-o-d-e-r. I work with the University of Nebraska-Omaha at College of Business Administration. The program I work in is the Pollution Prevention Regional Information Center, or P2RIC. Pollution Prevention Regional Information Center is funded in part and has been for 17 years by a U.S. Environmental Protection Agency. We are one of eight centers nationally. The centers are focused on being an information network to assist mostly businesses and technical assistance providers with reducing waste. And reducing waste is what happens upstream of recycling. I am here today to be the voice for waste reduction in the Waste Reduction and Recycling Act that you're looking at. If you have the slides in front of you, and I hope you might, I'm here as an educator which is why I'm offering as a neutral. I just pulled some slides quickly from a presentation that I've used many years in talking with student groups. Student groups almost always at the college level, whether it be at UNMC and the College of Public Health or in the College of Business Administration or at UNO over at PKI with engineering students. The waste reduction is, if you're looking at the first slide, waste reduction is not recycling. It is what happens before recycling. We've all heard of "reduce and reuse." That's what happens before you recycle. And the waste management hierarchy was set up in 1990. It also provided the funding that has been used nationally for waste reduction programs around the country. The waste management hierarchy says the first order of business with waste is to prevent it. That is the most effective thing that people can do in managing their waste is to prevent it. There's more of an explanation on the third slide. But essentially it focuses, the waste management hierarchy and the prevention focuses on efficiency and conservation on that third slide; does not focus on recycling. The other thing that it focuses on is toxic use reduction. So, for example, if you have a gallon of oil-based paint and a gallon of latex-based paint the argument would be to move for latex-based paint because you don't have the solvents that you have to deal with or the volatile organic compounds. That's a toxic-use reduction. Efficiency is taking raw material and using more of it in the product that you sell, therefore leaving less waste that has to go out. In Nebraska, slide 4, Nebraska has adopted their own version of the integrated waste management hierarchy in 13-2018 where they talk about volume reduction as being the preferred method to manage waste, not recycling. The best thing that people can do is to reduce the waste. Okay? Slide five, I've offered you and I've offered you another version of that with the table tents that have yet to be handed out. A first "do no harm" kind of triangle, it's a graphical representation of the waste management hierarchy. And just as in managing our environmental health and reducing risk to human health in the environment, we would first do no harm. It is the principle of all healthcare. And that is what the waste management hierarchy is about. So the graphical representation that you have in front of you is meant just as an educational tool and a reminder for folks. Slide 6--we have some synonyms for pollution prevention. Notice that waste

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reduction and waste minimization are there, but recycling is not part of waste reduction, waste minimization. If you look on slide 7, you see there's also a food hierarchy. What do we do with our food waste? And if you look on that slide 7 food waste, you'll see that composting, which is recycling by any other name, taking a waste material and turning it into a product, then you will see that the composting is second to last in the preference. Okay? There are many, many things that should be done with our food prior to composting. Just as there are many things that should be done with waste prior to recycling. Is this a time issue? How much time have I got?
[LB1101]

SENATOR FRIESEN: About half a minute. [LB1101]

RICHARD YODER: Half a minute...I'll skip slide 8 and go straight to slide 9 and the other handout, the Oregon Department of Environmental Quality has a great slide that shows that if your goal is to reduce the risk to human health and the environment, whether that's by saving energy, by reducing greenhouse gases, by reducing exposures to toxic-use material, that if you recycle a plastic bottle, that you create almost the same amount of pollutants as using virgin plastic bottles. But if instead, as I know you guys have seen, you use your metal bottle and fill it up with tap water, right, that is waste reduction. Okay? That is eliminating the creation of waste. So I would encourage you to fight waste, to use all the tools you have. Recycling is important. I'm not saying it's not important, it is important. But if it's the only tool you have every...like a hammer, everything looks like a nail. That's it. [LB1101]

SENATOR FRIESEN: Thank you, Mr. Yoder. Any questions from the committee? I just have, I guess, one question, kind of. I get your focus. How would...businesses, how do you incentivize a business to use less packaging, less boxing. I mean, they're already, I would assume, trying to cut costs and it costs money to do it too, but how do you get them to use less products in their wrapping and shipping, because it is an issue. We've talk about it a lot, I think, in the past.
[LB1101]

RICHARD YODER: Sure. Costs are an issue with any of the waste management options that you have. And what we do is we offer training in lean manufacturing which is pretty well recognized in the industrial engineering field and where we go through all the processes and we do some value-stream mapping and resource-efficiency mapping and we help the business retool, re-engineer their process. People very much like to have a Rube Goldberg add on kind of solution to their existing processes. They would rather invest in something that adds on than to look at how they got there. And so it's...honestly, it is more work to retool your existing process than it is just to add on something that catches your waste and diverts it somewhere else. But it's a re-engineering process almost always. [LB1101]

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SENATOR FRIESEN: Okay. Any other questions from the committee? Thank you, Mr. Yoder. [LB1101]

RICHARD YODER: Thank you. [LB1101]

SENATOR FRIESEN: Any others wishing to testify in a neutral capacity? Seeing none, that will close the hearing...except...wish to close. [LB1101]

SENATOR MELLO: Very brief, Vice Chairman. Thank you, Vice Chairman Friesen, members of the committee. I think a couple points I just want to point out in regards to the bill. The report that DEQ would do would not be due to the Legislature until December, 2017. We did create the caveat in regard to them allowing to be able to use cash funds as an agency to be able to help conduct the report for them to be able to use for research, statistical research, and staffing purposes to be able to do a true comprehensive study. And you can see on the fiscal note that it's spread out mostly in the first year of the study and then a smaller amount in the second year of the study. With that, Mr. Vice Chair, I'd be happy to answer any questions you may have, but as you could hear from the testimony, it just seems like this is a long-overdue consideration for the state to consider a new, essential, strategic plan to address significant needs regarding waste reduction and recycling as a state. [LB1101]

SENATOR FRIESEN: Thank you, Senator Mello. Senator Johnson. [LB1101]

SENATOR JOHNSON: Thank you. Being on Appropriations and involved in that, what percentage of the cash funds are we using here? I'm assuming you're supporting it that this is a good use of those funds? [LB1101]

SENATOR MELLO: It's, give or take, there's about \$3.5 million out of \$4 million a year that comes into this fund. And this fund, give or take, is about...I want to say it was close to \$265,000 the first year and \$65,000 the second...\$65,000 the second year, so less than, obviously, 10 percent of the funds would be used to do a true study of all of these programs, as well as a number of other issues surrounding in the bills as it lays out. Senator Hughes asked a question regarding market development. That's spelled out in the bill to evaluate market development as it relates to the economic development components of the recycling industry as well. [LB1101]

SENATOR JOHNSON: Thank you. [LB1101]

SENATOR FRIESEN: Thank you, Senator Johnson. Senator McCollister. [LB1101]

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SENATOR McCOLLISTER: Back on the topic, thank you, Senator Friesen. Back on the topic of the appropriation coming from cash funds, would there be any money available from the federal sources through grants or anything? [LB1101]

SENATOR MELLO: I'm not...that's a great question, Senator McCollister. I'm not aware of that in talking with DEQ. When we crafted the language, it was more of in the sense of giving them the flexibility of utilizing the cash fund to be able to utilize for them since they're doing the study and they're likely, as they said, there will need to be some staffing assistance and professional research done to help collect the data that will be necessary to put together a comprehensive plan. But I'm sure if there's available other additional funding, they...I'm sure they would be looking to utilize that. [LB1101]

SENATOR McCOLLISTER: Thank you, Senator Mello. Thank you, Senator Friesen. [LB1101]

SENATOR FRIESEN: Thank you, Senator McCollister. Senator Schnoor. [LB1101]

SENATOR SCHNOOR: Senator Mello, I'm kind of surprised there's no rep from DEQ here to testify. Can you comment on that? [LB1101]

SENATOR MELLO: Actually, I'm...I'm, actually, happy there's no one testifying on the bill in the sense that in years past, Senator Schnoor, DEQ normally would probably testify in opposition to some of the bills that I've brought to this committee. But in talking with them, I think to some extent, I think they didn't want to take an official position on the bill in light of us simply asking them to do this. They did work with us on the language. And, essentially, we had run multiple drafts of language by them to, essentially, get their okay in regards to how the language looks, how they would be the ones that would be implementing the language and implementing the process moving forward. And so I took that as a positive sign in my view that we were able to work with them on it. But as we all know, code agencies direct...report directly to the Governor and get their authority through the Policy Research Office. So in some respect this may just not have gotten the approval for the agency, so to speak, to testify in support of the bill or on the bill through the Policy Research Office yet. [LB1101]

SENATOR SCHNOOR: Okay, thank you. [LB1101]

SENATOR FRIESEN: Thank you, Senator Schnoor. Any other questions from the committee? Thank you, Senator Mello. [LB1101]

SENATOR MELLO: Thank you. [LB1101]

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SENATOR FRIESEN: Close the hearing on LB1101. Now we'll have Senator Haar open with LB1071. Welcome, Senator Haar. [LB1101]

SENATOR HAAR: Thank you, Vice Chair Friesen. I'm H-a-a-r, brother Burke Harr, by the way, is Irish. They migrated to Canada, snuck over the border and changed their name, so I don't know. (Laugh) That's the short of his name. Since I moved from one to two, I just got to comment real quickly on landfills. I moved from Freeman, South Dakota, to a small town in 1957 and we used to have the dump, and maybe other communities had the dump where everybody just took their stuff out and dumped it. It was always smouldering. And you can't do that now and it's good. And having been on the Lincoln City Council when the county was trying to find a new landfill site, boy, dumps or landfills are not cheap. And so didn't get mentioned too often, but communities are saving a lot of money by not just having dumps anymore. Anyway, LB1071 is about solar. LB1071 will make two important changes in current law. One is to authorize community solar programs; and two, provide incentives for solar development. And so I'm going to talk about those two: authorizing community solar programs and then providing incentives. There are three major reasons for LB1071. First, solar energy is very popular with the public, but little solar development has occurred in Nebraska to date. It's a great idea. Two, many communities and community organizations have shown interest in developing community solar projects, but only one community project has been developed to date. And three, solar energy has a potential to provide numerous benefits to communities and individuals including economic and social benefits. So the popularity of solar--the 2015 Nebraska Rural Poll found that 80 percent of respondents either agreed or strongly agreed that we should be doing more to increase wind and solar development in Nebraska, including 75 percent who believe that more should be invested in wind and solar development. However, although Nebraska is in the top 15 in U.S. in solar potential, very little solar development has occurred to date largely due to upfront costs. The Lincoln Electric System has been one of the leaders in solar development in the state of Nebraska with 256 kilowatts developed in its service area at the present time. But according to the data from the Power Review Board, it appears that less than 2 megawatts of solar have been developed across the state so far. Community interest: There's also been a great deal of interest in community solar. Communities all across Nebraska have expressed interest in solar projects including Scottsbluff, Aurora, McCook, Venango, Holdrege, Gothenburg, Bellevue, Beatrice, and South Sioux City. However, there's only currently one community solar project located in Central City with a capacity of 200 kilowatts. And I think you're going to hear more about that later. Non-profit organizations like homeless shelters and churches have also expressed interest in community solar projects. The Siena Francis House in Omaha is an example of a non-profit that could benefit from being able to use solar generation to reduce its electric bill. Some of the benefits of solar energy: solar energy can provide many benefits. It has the ability to lock in rates for years into the future because there is no fuel cost. Solar generation can be designed to provide maximum electricity at the same or just about the same time of peak demands for energy on hot summer afternoons when there is the greatest demand for electricity for irrigation and air

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conditioning. Solar generation can help reduce electric bills for communities and community organizations. This can be very helpful for communities that have seen their electric bills increase in recent years and expect to see increases in the future. For example, reduced electric bills for a wastewater treatment facility would reduce the amount of property tax revenues needed for that facility. Similarly, a homeless shelter could be...use reduced electric bills to support their core functions of addressing homelessness. Solar generation can also help businesses and individual reduce their electric bills. This can help businesses be more successful and help households meet their expenses. Solar energy does not use water or emit pollutants including green house gas emissions. So the reasons for LB1071: at the present time, there are no provisions in state law specifically authorizing community solar projects. It's kind of a gray area. LB1071 would authorize such projects by allowing subscribers to receive a bill credit for electricity generated in proportion to the amount of their subscription in a community project. This could be used in several ways. Municipalities or rural electrics could provide opportunities for their customers to buy in to a community solar project. Community organizations and non-profits could also get groups of people to join together to create a solar project for individuals and then to benefit an organization. And for example, somebody might want to be able to invest in solar, but not have a roof that works because it's facing the wrong direction or because there are neighborhood restrictions or maybe trees. And the reason for the incentive then: LB1071 sets up a grant program to be administered by the Nebraska Energy Office. No grant can exceed 15 percent of the cost of the project or \$150,000. These grants are intended to provide incentives to make more solar development happen in Nebraska. Although the cost of solar has come down dramatically in recent years, cost is still a barrier to solar development. Communities have been unwilling to invest in solar development because of provisions in contracts that would require them to make up the additional cost of development so that a grant provided by LB1071 could make community solar projects economically viable. Properly allocated incentives have consistently been shown to yield results. Nebraska's ethanol industry, for example, which has done much to provide economic benefits to our agricultural economy, was largely stimulated through incentives to begin with. These incentives have paid off for the benefit of the people of Nebraska. The incentives in LB1071 are intended to have the same purpose. LB1071 could benefit Nebraska's public power districts by providing funding to programs that support solar energy. It would also help their customers invest in solar energy which is what their customers have consistently said they want. I'd be glad to work with public power districts, community representatives, and others interested in solar development to make revisions to LB1071 to help Nebraskans develop more solar energy. And just today, as an example of where we need to do a bit if tweaking, I talked to Tim Texel from the Power Review Board and he said that we need some language allowing a community or a business solar project to sell electricity to another political subdivision. So there's...we have already been working; we worked with public power, we've worked with the Energy Office, with the Power Review Board. But there may be a little bit of tweaking we need to do in that. We're more than happy to oblige. So with that we have some

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people coming to testify on this. And if you have any questions, you might want to listen to them, although I'll take questions first if you want. [LB1071]

SENATOR SCHILZ: Thank you, Senator Haar. Any questions for Senator Haar? Seeing none, thank you for your opening. [LB1071]

SENATOR HAAR: Thank you. [LB1071]

SENATOR SCHILZ: Now we'll take proponents for LB1071. Anyone in support? Good afternoon. [LB1071]

JOHN ATKEISON: Good afternoon. Senators, thanks for allowing me to speak. My name is John Atkeison, J-o-h-n A-t-k-e-i-s-o-n. Have two sets of interests I'd like to speak to briefly. One, as a member of the solar community for ten years, almost exactly ten years, I've been a certified grid-tie solar photovoltaic installer and have worked in several phases of the industry; been on the roof including not far from here installing systems. I've been a sales manager for a solar panel manufacturer. And I've worked in a planning capacity for an installation company. Secondly, as an energy activist, I'm also very pro-solar power because it is not only very clean, but becoming...almost there, becoming very cheap. I was at the Nebraska League of Municipalities meeting here in Lincoln not long ago and heard utility managers say things like-- why should we pay somebody 10 cents a kilowatt hour for electricity when I can make it for 5.7 cents using photovoltaics? Which you haven't been hearing statements like that for very long, but that is a very much a current reality. So I'm very much in support of the public power system. The change is difficult. Getting things right during a period of change is even more difficult. But I have every confidence that public power will be able to accommodate solar just as it has wind, which is pretty much the cheapest wholesale electricity you can get now. Also, all of these additional forms of generation...well, the folks that run our power systems aren't stupid. They know how to adapt; they can predict this power. If you go to the Southwest Power Pool Web site you can see how accurately they've begun to predict the output of the wind power, for instance. It's just very remarkable. The bill is something, I think, that should be supported and moved forward. I do think, I agree with Senator Haar, there's a couple of tweaks. I think the definition of community solar is too narrow. I know a number of people who would like to come together with their neighbors, pool their money and build one, because right now I'm not aware of a utility that will parse out the generation. So that would be one of those things. And I know that Senator Haar and his staff are very open and cooperative and will be able to work through any of those issues. But I would just like to underscore that the cost is now much more reasonable. It's very clean and we should be serious about building the infrastructure and supporting this new industry just like we support new businesses and other industries. Alternatively, I would suggest somebody wave a magic wand and take away all subsidies for all form of energies and that

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would be nice, but probably somewhat difficult, especially from the State Capitol. With that, I'd just like to underline my support for the bill. Thank you very much. [LB1071]

SENATOR SCHILZ: Thank you, sir. Any questions? Senator Friesen. [LB1071]

SENATOR FRIESEN: Thank you, Chairman Schilz. Are there any other tax credits now available on the federal level for solar? [LB1071]

JOHN ATKEISON: There are. The 30 percent tax credit for solar was just extended. There are also favorable rules, accelerated depreciation and so forth for businesses that people take advantage of. [LB1071]

SENATOR FRIESEN: What would be a system, a typical owner, one-owner system, what would be the payback time period? [LB1071]

JOHN ATKEISON: You know, I really don't like very generalized statements, but I'll take a stab at it with that hesitation noted because everybody here could come up with a different number. But it's a break even number by that measure, it's somewhere between 7 and 12 years before the power becomes entirely free, aside from the fees you pay to your...properly to your utility to maintain the grid and so forth that you'll still rely on. As a return on investment, it's somewhere between 3 and 7 percent depending, again, on what all you have to go through. It's like any other job, you know. I want a new room on my house. Well, what kind of room? You know, it's...you know there's a lot of latitude there. But it's...those are some generally reliable numbers. [LB1071]

SENATOR FRIESEN: Okay, thank you. [LB1071]

JOHN ATKEISON: Um-hum. [LB1071]

SENATOR SCHILZ: Thank you, Senator Friesen. Any other questions? Senator Schnoor. [LB1071]

SENATOR SCHNOOR: In addition to Senator Friesen's, will...and this, once again, is kind of general, but will all solar systems pay for themselves? Does any solar system installed produce enough energy to pay for itself? [LB1071]

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JOHN ATKEISON: I have a lot of faith in the human ability to mess anything up. You know, but I think it would have to be a fairly exceptional system, you know. Back in the '70s there were some creepy people going door to door and they would...shoot, they would put the panels on the north side of your house where you don't get any direct sun. So, I'm not...I don't think I'm able to answer that question. Maybe if you asked it a different way, I'd sure try. [LB1071]

SENATOR SCHNOOR: Well, I don't know how to ask it. If you're saying...if it's installed correctly...obviously, if it's installed incorrectly, somebody puts panels on the north side of the house, it's never going to work right. But in today's, I guess, today's standards, will solar...does a solar energy or a solar system installed...you know, it could be a small scale on a house, it could be a much larger scale that you have referred to, will they, in fact, pay for themselves? [LB1071]

JOHN ATKEISON: In any reasonable scenario I'm aware of, yes. [LB1071]

SENATOR SCHNOOR: Okay. Thank you. [LB1071]

SENATOR SCHILZ: Thank you, Senator Schnoor. Any other questions? Senator Johnson. [LB1071]

SENATOR JOHNSON: I'll make a comment why that probably can't be answered and maybe you can answer it, but we purchased a house several years ago, didn't have any insulation in it, didn't have any storm windows on it, and we put solar in. Solar people said it would lower our utility bill by a third. The insulation people told us it would lower it a third. And the people who sold us the storm windows...we're still getting electric bills. (Laughter) (Inaudible). [LB1071]

JOHN ATKEISON: Math is funny...(inaudible) really fuzzy math. (Laughter) It's every situation. [LB1071]

SENATOR JOHNSON: Which one failed? [LB1071]

JOHN ATKEISON: Yes. I think the sales pitch failed because, you know, a lot of salesmen have two faults. One is they don't know when to shut up and listen. And, you know, having been a sales rep I speak from personal knowledge, and the other is to overpromise. And you don't do anybody any favors in the long term when you do that. One of the things this bill does address is rather than rely on one particular place and hope your neighbor doesn't grow a tree that shades that part of your roof is it promotes the opportunity for people to come together, put in a larger solar system that can be oriented properly, that can be worked with the local utility and that can help to pursue the Holy Grail of utilities which is to shave peak, to really put the power out. But

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when you need it at that peak demand period of the day, and photovoltaic solar electrical system faced southwest uses, you know, gets overall fewer kilowatt hours, but shifts that power to the peak hours of 4:00 to 7:00 p.m. in Nebraska just tremendously. And so there's things like that in this bill that are not spelled out. But I think this bill will make the solar resource much more useful to our public power districts. And I think that's very useful. [LB1071]

SENATOR JOHNSON: Thank you. [LB1071]

SENATOR SCHILZ: Thank you, Senator Johnson. Further questions? Seeing none, thank you for your testimony. [LB1071]

JOHN ATKEISON: Thank you. [LB1071]

SENATOR SCHILZ: Further proponents? Good afternoon. [LB1071]

CLIFF MESNER: Good afternoon. Chairman Schilz and members of the committee, my name is Cliff Mesner, C-l-i-f-f M-e-s-n-e-r. I'm an attorney and tax credit developer from Central City, Nebraska. My wife and I decided to do some solar for our home and business in Central City about a year ago. After discussion with our city administrator, the project turned into the joint development of the 200 kw solar garden located in Central City that Senator Haar spoke about. This project uses virtual net metering and has a number of owners in the community. I was quite surprised by the public reaction to the project. We were contacted almost immediately by other cities and are currently working with a number of communities to help them develop solar. We have responded to RFPs for the Nebraska Public Power District and have been selected to do their pilot solar projects in the village of Venango and the city of Scottsbluff. We're also doing solar on two low-income housing tax credit projects in Holdrege and McCook, and are helping a number of individual businesses with solar, especially with REAP grant applications. The economics of solar are very good right now, especially for businesses. Many businesses are looking to develop solar. The reality, however, is that our solar allows us to go around the city and NPPD while still using them as a battery. For that reason, I think it is important that we find ways to combine solar energy with our public power utilities and our cities. We are actively searching for ways to integrate solar development into our public power model so that our utilities are not hurt by the development of solar across the state. However, because we're the only public power state in the nation, Nebraska has some unique challenges surrounding the development of solar. Because our utilities and communities are tax-exempt, they cannot use the solar tax credits or the depreciation. They do not qualify for REAP grants. Moreover, our cities are trying to use solar to offset the cost of energy at the wholesale level which is significantly lower than retail costs. Our utilities are trying to use solar to offset the cost of generation which is lower yet. Our cities are trying to use solar for a variety of reasons. Some want to control the

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rising cost of their own electric bill. They've watched as their utility rates have doubled over the last 15 years and they expect them to double again over the next 15 years. They will have to generate that money to pay that bill by raising property taxes which they don't want to do. Other cities want solar to serve local businesses that are attracted to the fixed cost that solar can provide for them or are looking to have a smaller carbon footprint. And yet other cities want to own electric generation for resale. Our utilities are trying to figure out how to do solar at competitive rates while giving...without giving single communities an advantage over other ratepayers. All of this is not impossible to do. It follows the same pattern used to develop tax-credit housing with our cities. It's fairly similar to what we do with the wind energy projects in this state. It will require the creation of a public/private partnership where private investors can take advantage of the federal credits and pass that benefit through to the communities. There are several models that can be used. A common model is a separate LLC that owns a system that has a purchase power agreement with a city or utility, often with an option to purchase. The model I am most enchanted with right now is a community garden arrangement where individuals in the community buy panels but the city takes a fee for managing the system to replace its lost energy sales. The process used may vary from community to community depending on available investment capital and whether they're a wholesale customer or a retail customer of our power district. While these models have been done in other states, the process is a little unique in our public power state. It requires some additional effort to figure out the template. That runs up the transactions costs and makes the economics more marginal. I think it is in the state's best interest to share the cost for communities and utilities to build pilot projects with a template that can be reproduced. That is what this legislation does. I hope you will approve the legislation and help integrate solar into our cities and utilities. I will be happy to answer any questions you may have. [LB1071]

SENATOR SCHILZ: Thank you, sir, for your testimony. Any questions? Senator Friesen. [LB1071]

SENATOR FRIESEN: Thank you, Mr. Mesner, for coming in. [LB1071]

CLIFF MESNER: Thank you. [LB1071]

SENATOR FRIESEN: You've done a...you have good experience, I guess, in a lot of different places in housing and solar and you have knowledge of the financing and how to put these projects in. I think that's what makes it work. The solar plant in Central City, you did set up and it has multiple owners now and there is...in order to use the tax credits, does it get to the point where you need to either sell the tax credits or do you always find individuals that can use them? [LB1071]

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CLIFF MESNER: In Central City, everyone that is in that project is using their own credits. There are six businesses...five businesses and three individuals that own parts of that system. There are, I think, three or four that have loans from the Nebraska Energy Office and three have REAP grants from USDA. So the businesses are allowed to buy...use the REAP grants and buy them down. The businesses get the depreciation. The homeowners only get the credits. [LB1071]

SENATOR FRIESEN: So would you say the biggest thing that needs to be done, kind of, is to make it easier to form these groups so that it's cheaper to organize them and run them. Is that important or which... [LB1071]

CLIFF MESNER: Yes. I think that the critical part right now is that when we do this at a community level or utility level, other than a solar garden, if the city wants to own part of it, then we have to sell off those credits which I should have said the city of Central City actually owns 25 kw of the system in Central City. Those credits were sold to a private individual who used the credits. That model is what's messy, is taking those credits and getting them off to private investors and getting a decent return on it. You want to get as much money from the investors as you can to apply to your...to help your city and you don't want to have to pay a huge amount of transaction costs. And that's difficult to do because the larger the system you put together, the larger the group of investors you need. And if you put together a 2 megawatt system, someone is going to write off \$2 million of tax in that initial year. And to find investors that can write off \$2 million in tax, you're talking about a different group of investors. You're looking at corporate investors, probably banks, that sort of thing. And putting that...and as soon as you go to them, they have very strict underwriting requirements and that pushes up your transaction costs. And that's part of what's making it difficult to do. So you have a system where if we're doing with individual people who want to buy into the system, the economics are very good and it works very well. And as soon as you try and apply it to a city or utility level, the economics become very marginal. That's why I think it's important that we find some way to figure that out and to set that system up. The first two or three will be far more expensive than the rest of them. [LB1071]

SENATOR FRIESEN: Okay. Thank you. [LB1071]

SENATOR SCHILZ: Thank you, Senator Friesen. Any further questions? Seeing none, thank you for your testimony. Next proponent. Good afternoon. [LB1071]

KENNETH DEFFENBACHER: (Exhibits 1 and 2) Good afternoon, Senators. I'm Kenneth Deffenbacher, that's K-e-n-n-e-t-h D-e-f-f-e-n-b-a-c-h-e-r. I'm a past president of Nebraskans for Solar, a 501(c)(3), public interest, non-profit. I testified before this committee three years ago in support of Senator McGill's solar gardens bill. As I recall, that bill did not make it out of

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committee. At that time, the amount of solar installed in this state was minuscule. When sunlight to electricity conversion was mentioned, however, a surprising number of the public would then express interest and a desire to learn more. Perhaps a relative invisibility of solar arrays in this state at that time was the explanation for a lack of spontaneously expressed interest. Fast forward three years, and we find much more publicly-expressed interest in and actual installation of solar arrays ranging from home installations of a few kilowatts to 10 to 25 kilowatt arrays installed by a few farmers and ranchers across much of the breadth of our state. To the 5 megawatt array that in a matter of months will be conveying electricity to Lincoln Electric Systems from West Holdrege Street. Rumors abound concerning the possible utility-scale installations in other public utility districts. And I can confirm, I better not reveal my sources, those are definitely a little more than a rumor. A number of cities which constitute their own public utility districts have shown interest in installing solar gardens, as was just testified to, Central City being the first to do so. Before long, solar electric production in Nebraska may have increased from minuscule to relatively small, but growing. Finally, we have a director in the Nebraska Energy Office who has expertise in clean energy development and who supports solar as well as wind energy development. I won't reiterate all the benefits that LB1071 would provide, those listed on the second page of the bill...draft bill. I will reiterate two very important ones: solar energy can help Nebraska's public power industry by providing economic development in their service areas, and solar energy can attract new businesses to the state. Consider Google's server farms outside Council Bluffs, Iowa, as an example of what can happen, although available wind energy was the attraction in that case. Iowa's...speaking of Iowa, Iowa's solar energy tax credit makes for an interesting comparison with what is proposed in LB1071. Iowa provides \$5 million per year to cover both residential and business applications. The credit is 15 percent up to a maximum of \$5,000 for residential installations and 15 percent up to a maximum of \$20,000 for businesses. Access to these funds is on a first come/first served basis, although, they've had this for two or three years, and they're running over...or about to in terms of using all that money up come the end of December. We can compare these limits with what is proposed in LB1071: \$4 million per year to cover grants to both business solar and community solar entities with grant maximums of 15 percent of project cost, up to a maximum of \$150,000. Iowa businesses could only receive \$20,000 maximum, while a Nebraska business or community solar entity could receive as much as \$150,000. But of course they must submit a grant application and might or might not receive a grant. However, Iowa's solar energy tax credit certainly achieves its purpose--the development of solar energy as the \$5 million fund is fully expended each year. And if you'll note in that additional handout I provided, as of this Tuesday, apparently things are working fairly well. A senate subcommittee in the Iowa Legislature unanimously approved a bill to expand the solar energy tax by 50 percent from \$5 million to \$7.5 million per year. The introducer said the state has provided \$11.6 million in tax credits to support 1,821 projects in 92 counties. I looked on the map, there are 99 Iowa counties so that's pretty good coverage. It has leveraged \$85 million in investment, which is not bad. Also, he said 700 jobs have been created in Iowa's solar energy industry. This is a win-win for jobs, for farmers, for businesses, for consumers, and for the

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environment. Now, the intent of LB1071, of course, is to catalyze larger source of solar installations than those encouraged by Iowa's solar energy tax credit. Solar farms up to 2 megawatts in size in Nebraska can certainly stimulate economic development and provide additional tax revenue, not to mention the other advantages listed in the draft bill, LB1071. [LB1071]

SENATOR SCHILZ: Thank you, sir. Any questions? Seeing none, thank you for your testimony, appreciate it. Next proponent please. Good afternoon. [LB1071]

MARY RUTH STEGMAN: Thank you. My name is Mary Ruth, M-a-r-y-R-u-t-h, Stegman, S-t-e-g-m-a-n. I live in LD-9 and Senator Howard is my senator. Today I am speaking for Omaha Together One Community, OTOC's environmental action team. As you may know, OTOC is a faith-based organization made up of member churches in the Omaha area. It is from this perspective that I wish to speak. In the first of the Genesis creation stories, God created the sun and its light twice, on the first and fourth days. The biblical author was not a scientist, but he or she understood how important the sun and its light are to our existence. It is our only source of energy. Geophysicists tell us that the lifespan of the sun began roughly 4.5 billion years ago and will continue for about another 5.5 billion years. From the perspective of time, we happen to be living close to the middle point of the sun's lifespan. The devil is in the details, but the sun will sustain us long after coal, oil, and natural gas resources are deplete. And they will have left huge carbon footprint along with their exhaust. Last fall, Pope Francis gave us a wonderful teaching in Laudato Si that he said was addressed to every person living on this planet. Toward the end of Laudato Si, Pope Francis addresses the role of national and local governments. In paragraph 177, he says that political and institutional frameworks are to "provide best practice to stimulate creativity in seeking new solutions and to encourage individual or group incentives." His prophetic words, it seems to me, apply to LB1071. It does seem to promote best practice to stimulate creativity in seeking new solutions and to encourage individual and group initiatives. Now I don't need to tell you what's in this bill or that the energy of the sun is free. I would like to say there are many Nebraskans, including myself, who would like to access this clean energy as our source of electricity. LB1071 would help us do that. Thank you again for listening to my faith-based perspective of this bill. [LB1071]

SENATOR SCHILZ: Thank you, Ms. Stegman. Any questions for Ms. Stegman. Seeing none, thank you very much for your testimony. [LB1071]

MARY RUTH STEGMAN: Thank you. [LB1071]

SENATOR SCHILZ: Further proponents. [LB1071]

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MICHAEL SHONKA: Good afternoon members of the committee, my name is Michael Shonka, M-i-c-h-a-e-l, Shonka, S-h-o-n-k-a. I'm the president of Solar Heat and Electric. I've been in business for 30 years in the solar business in one shape or form or other. I'm probably the oldest of the original group that started in the first wave of solar back in the 1980s. I'm testifying in favor of this today not just because of my vested interest, but because it's really the right thing and it's a good thing to do for the state of Nebraska. It's a very essential thing for our basic economy. But first a little background about me. I'm currently also an instructor at community colleges. We've been teaching in every community college across the state. We have this wanderlust of students that just totally amazes me when you talk about solar. And it gives them a sense of hope that something that, I think, not very many other types of subjects motivates them and that is one of the things they're allowed to do is get a dream that they can go back home and make a living. We are critically short of construction, plumbing, HVAC and electrical trades in our small towns. I know a guy in Burwell, Nebraska, who is over 70 years old still being a plumber because no one else is there to do the job. We need to motivate our youth today. And I think solar is a big, big part of that. But I also think we need to talk about the economic arguments because qualitative ones, as you know, don't really always get the best consideration. First off, if we have this type of an incentive it will bring us to parity with other states. Other states have proven to be...well, exceptionally successful in their renewable energy applications. Iowa is number one in the nation for renewable portfolio. Colorado is the number four for the largest of the solar state economies. Minnesota is coming on very strong with its incentives, having unleashed the corporate financial might of their state to reinvest in their own businesses and actually are now exporting. Several Minnesota companies are doing the wind projects in Nebraska here. Well, one of the most important factors, I think, that's a overriding concern is that 95 cents out of every energy dollar we spend leaves this state. We got to change this. That's a huge trade imbalance. Every time a coal train comes into this state, that's money leaving our state. And when you have fossil fuel dollars that only circulate once in the state, once, maybe twice, renewable energy dollars recirculate 8 to 11 times. This kind of tapping of local capital and the ability to reinvest in your own community and bring it up to a higher standard of living, keeping our costs low, I think, is essential to the future of our youth and the future of our business opportunities in the state. So this incentive, as it is, couples the benefits of public power which is the one thing that is keeping us from an even greater trade imbalance in energy and it really helps put the benefit of corporate capital and individual capital, local capital, that's the essential part here, it's all local dollars. Because a lot of these other states are using PPA-types of contracts. And the power purchase agreements are 20-year contracts you sign up for a set price. Who knows what in 20 years market conditions will be. It doesn't really matter. You're dealing with a large national bank and you're exporting your capital. So you might have put solar in, but you didn't get the economic benefits of putting solar in. This is the one technology that I think will really benefit this state and that we are able to take our local dollars, reinvest it, and keep the money locally and reduce our exports of energy dollars. So it's the one ability to transfer our

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technology and keep our dollars local for trade. So thank you very much. Any questions?
[LB1071]

SENATOR SCHILZ: Thank you, sir. Any questions? Seeing none, thank you very much for your testimony. Further proponents? Good afternoon, Mr. Cavanaugh. [LB1071]

JAMES CAVANAUGH: (Exhibit 3) Chairman Schilz, members of the Natural Resources Committee, my name is James Cavanaugh, J-a-m-e-s C-a-v-a-n-a-u-g-h. I'm an attorney and registered lobbyist representing the Sierra Club, appearing today in favor of LB1071. We would commend Senator Haar for bringing this important, forward-looking matter to your attention. Nebraska ranks in the top 15 states in solar potential. But unfortunately, we lag far behind our potential on actual solar production. As you've heard from previous witnesses, surrounding states far outstrip us in their investment in solar energy. And we have a unique opportunity here to bring together a partnership of public power, local governments, and individuals to make great strides forward in the area of local jobs and local energy. The closer energy production is to where it's being used, the more efficient the delivery is and nothing is closer to a home than a solar panel on the roof or on one of the buildings. We think that this is part of a solution to our long-term problem relative to the use of fossil fuels and to climate change. The investment that we make in solar power here today will not only aid in controlling the climate change that's inevitably happening now, but will also foster our local economy in the production of renewable energy which is probably in the twenty-first century going to become one of our major manufacturing industries. I'd be happy to answer any questions you might have. [LB1071]

SENATOR SCHILZ: Thank you, Mr. Cavanaugh. Any questions? Seeing none, thank you very much for your testimony. [LB1071]

JAMES CAVANAUGH: Thank you. [LB1071]

SENATOR SCHILZ: Further proponents? Good afternoon. [LB1071]

JOHN HANSEN: (Exhibit 4) Mr. Chairman, members of the committee, again for the record my name is John Hansen, J-o-h-n, Hansen, H-a-n-s-e-n. I'm the president of the Nebraska Farmers Union. Thank you for this opportunity to appear before your committee. We have been working on wind and solar issues for a long time; wind longer than solar. And I'm passing out to the committee this year's agenda for the Wind and Solar Conference. We've been the...we changed it and updated our title and our focus from wind conference to wind and solar several years back to reflect what's going on in the industry and reflect the status of the level of interest on both small individual, but also on utility-sized solar. And so this last year's conference we had Cliff Mesner was one of our presenters, did an excellent job. And Michael Shonka, who just testified a bit ago,

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is a member...one of the members of our advisory committee. In the audience today, David Rich from NPPD is also one of our committee advisers and working committee, as is Danielle Jensen from the Nebraska Energy Office. And we have been bringing together the latest and best information from a wide source of...on the part of a wide source of stakeholders on these issues for some time. And solar's time has come. And if you want, you can visit with Chairman Schilz who was gracious enough to welcome everyone to our conference this year. He might consider writing an autograph for your agenda. Senator Kolowski and Senator Schilz, along with Senator Haar were on the committee. And so having done this eight years, you know, each conference has its kind of own flavor and its own focus and its own mix. And this...two years ago there was a growing amount of interest in solar, but we have never had the level of interest in solar and the interest from communities from across the state that attended. And they're looking and evaluating their options and trying to figure out how this works. So our partners who we work with as a part of this effort and it includes all of the NPPD, OPPD, LES, and all of our friends in public power, there is, I think, a widespread understanding and appreciation for the opportunity that's kind of before us given the incentives at the national level. I think we've got a real opportunity and window to take advantage of those incentives in the next few years, and for our public power state to try to figure out how to properly incent and work with folks of all sizes. Certainly community solar is at a level that it's never been before. Some of the advantages that haven't been talked about so far is that you don't have to worry about whether or not you're in the fly zone. And so the Central Platte and that whole part of the state that we're not going to put a wind project in that area because it's in the middle of the flyway. You have to have an interest in doing something. And Cliff Mesner pointed out--if your house isn't built right and you don't have the right roof, notwithstanding your windows and insulation, you can buy into a community project. And that's an efficient way to do it is to be able to pool your money and do it. And the last thing I would say is that we definitely do this as an energy whose time has come. And I was just making notes as I was listening to the testimony. And I've got four members of my seven board of directors of Nebraska Farmers Union are solar...either solar instructors or solar dealers and I count up another four members of ours who are also solar dealers and they are doing on-farm installations and small business and residential, but mostly farms. So that kind of gives you an idea of just how much interest there is. And with that I would end my comments for today and be glad to answer any questions if I could. Thank you. [LB1071]

SENATOR SCHILZ: Thank you, Mr. Hansen. Any questions? Seeing none, thank you very much for your testimony. [LB1071]

JOHN HANSEN: And thank you. And I wanted to also thank Senator Haar for bringing this issue forward and letting us discuss it today. [LB1071]

SENATOR SCHILZ: (Exhibits 5, 6, 7, and 8) Thank you. Any other proponents? Seeing none, we have a few letters. We have a letter from Rich Lombardi from the Wind Coalition; from

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Helen Deffenbacher from Nebraskans for Solar; and Frank Uhlarik from the city of Lincoln. And with that we will move to opponents. Are there any opponents to LB1071? Seeing none, we do have...oh, yep, we have a letter of opposition from Robert Byrnes from Lyons, if I understand correctly. So, do we have... [LB1071]

SENATOR SCHNOOR: Is it "Lyon" or "Lyons"? [LB1071]

SENATOR SCHILZ: Lyons, yeah, sorry. (Laughter) Any neutral testimony? [LB1071]

SHELLEY SAHLING-ZART: Good afternoon, Senator Schilz, members of the Natural Resources Committee. For the record my name is Shelley Sahling-Zart, S-h-e-l-l-e-y S-a-h-l-i-n-g hyphen Z-a-r-t. I am vice president and general counsel for Lincoln Electric System. And wasn't planning on it, but decided to jump up and testify in a neutral position. I love those when we don't really talk about the bill, but we've talked a lot about solar, so I thought I would talk a little more about solar. I've talked to Senator Haar's staff about the bill. I think there's a way to restructure that and make that a little more feasible and workable. And we're about...Lincoln Electric System is about to give folks a really large exposure to solar energy which I think will do a lot to pique interest and probably promote a lot more solar development. One of the first things we did was a little over a year ago, we put a 50 kilowatt solar array on the roof of our new training center at 27th and Fairfield Streets in north Lincoln. Happy to take any of you out to see that if you'd ever like to; that's operating very well. But we also signed a power purchase agreement a little over a year ago for a new solar farm that will be constructed this spring; hopefully operational by around June or so. It is a 5 megawatt solar farm, quite large, 45 acres, 15,000 solar panels, be very visible, it will be just west of Lincoln along the Interstate. You'll be able to see it very well and folks will, I think, start to get a little more interested in solar. We're doing it for several reasons. We do have a piece of that. It's kind of tied to our community solar. We don't structure it the way Senator Haar has identified in LB1071. Customers are helping to offset some of the costs of that by paying extra on their electric bill, but it's not a credit against their energy, it's just an extra payment to help support the installation. You can participate for as little as \$3 a month and you can add shares for a buck a share up to whatever you want. It hasn't taken off a whole lot yet. I think it will once they actually see the solar farm and see what they're investing in. And that's a pretty exciting project. But I think what it's really going to give us is a utility scale installation that will give us great operating experience. We're going to learn a lot about how to maintain them, how they operate in all the variable weather we have here in Nebraska. And it's an opportunity we're pretty excited about. In addition to that, we have a net metering program. The state law, as you know, provides for net metering up to 25 kW. We actually have a program that goes to a hundred. It's structured a little differently on the customer charge between zero to 25 and 25 to 100; and we pay a full residential rate until we get a certain amount of these on our system. So we're trying to do a lot to incent solar development, but it is a more expensive technology. The costs are coming down, but it is quite a bit more expensive than

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other technologies. And hang on because we're about to get some very real world experience in the next couple of years. I'd be happy to answer any questions. [LB1071]

SENATOR SCHILZ: Thank you, ma'am. Any questions? Senator Kolowski. [LB1071]

SENATOR KOLOWSKI: Thank you, Mr. Chairman. Thank you very much for your presentation. What amount of your business do you spend in R&D, like you're doing right here? Any idea? [LB1071]

SHELLEY SAHLING-ZART: Oh boy, yeah. As a percentage, it would probably be a very small percentage and we do it in a lot of different ways. But, for example, we're a member of the Electric Power Research Institute and I want to say we're paying them about \$600,000 a year. But that's research across all specters of the organization. And then we do little projects like this one, frankly. [LB1071]

SENATOR KOLOWSKI: Sure. Thank you. [LB1071]

SENATOR SCHILZ: Thank you, Senator Kolowski. Any other questions? Seeing none, thank you for your testimony. [LB1071]

SHELLEY SAHLING-ZART: Thank you. [LB1071]

SENATOR SCHILZ: Further neutral testimony? [LB1071]

TIM TEXEL: Chairman Schilz, members of the committee, my name is Tim Texel, T-i-m, last name is T-e-x-e-l, and I'm the executive director and general counsel for the Nebraska Power Review Board. My board is neutral on the bill, but the board would like to point out one issue in the bill that appears to be an unintended consequence of some language in there. I think it's easy to fix, but I'll go through it quickly. And Senator Haar kind of indicated I might in his opening. The language involved is in Section 4(2) and then (b) and (c). It's on page 3 in the green copy and it's on lines 18 and 19 and 24 and 25 on page 3 is what I'm specifically referring to. These subsections provide a definition for the terms "business solar" and "community solar." And the definition states that these are entities that have an agreement to sell the facility's electric output to "an electric utility or another political subdivision of the state of Nebraska." The board wanted to point out that the language as written would appear to conflict with the service area protections in Section 70-1011, not with the utilities part, but specifically with the language that says--or another political subdivision of the state of Nebraska. Section 1011 prohibits any power supplier from selling electricity to an ultimate user as the term is used there, I often say--end-use

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customer, in another power supplier certified retail service area. Political subdivisions that are not utilities are ultimate or end-use retail customers. So you might have a natural resource district, you could have a county. They aren't utilities, but they would be a political subdivision of the state, but they wouldn't be a utility. And that's the distinction I'm pointing out here. Those entities, since they'd be end-use customers would necessarily be a customer that somebody as a power supplier would be invading another service territory. That would be a violation of (Section) 70-1011. So the language that I cited in the bill would authorize owners of business and community solar facilities to enter into agreements with political subdivisions like the ones I mentioned. But it does not provide an exemption from the service area protections in Section 70-1011. So as written, the language would, essentially, allow for contracts, but it wouldn't allow the electricity to actually be sold because of that conflict. In the alternative, the owner of a business or a community solar facility could argue that the language in Section 1071 would authorize a limited group of entities, in this case, owners of business/community solars to engage in retail competition to a limited group of customers which would be political subdivisions that are not utilities. And I know I'm kind of getting into the weeds, but I'll have this in the record. And I'll be glad to answer questions afterwards or work with Senator Haar or the committee on this. But I would like to put in the record these issues. Creating a portion of retail competition even for limited groups would be quite a dramatic change to Nebraska's current system. So it appeared it was an unintended consequence. I contacted Senator Haar's office. It appears that was an unintended consequence. So we wanted to point it out. I think it's an easy fix. Depending on what Senator Haar and the committee wants to do, we could just take out "or another political subdivision" and that would solve the issue I'm bringing up. If you wanted to...whether it's intrastate or interstate sales, you could leave in or take out "of the state of Nebraska" after that. So I think it's a pretty easy fix, but as it's written could create an unintended significant issue with the service areas. So with that, that's what I wanted to point out and I'd be glad to address any questions. Thank you. [LB1071]

SENATOR SCHILZ: Thank you, Mr. Texel. Any questions? Seeing none, thanks for your testimony, appreciate it. [LB1071]

TIM TEXEL: Thank you. [LB1071]

SENATOR SCHILZ: Other neutral testimony? Good afternoon, Mr. Rich, how are you? [LB1071]

DAVID RICH: Hi. Good afternoon, Senator Schilz, Chairman, other members of the committee. I'm David Rich, D-a-v-i-d R-i-c-h with Nebraska Public Power District where I've been employed for 38 years. I'm currently the sustainable energy manager and a registered electrical engineer in the state of Nebraska. I also was not planning on testifying, but I wanted to share

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some information in a neutral position. A question was raised on the payback. And the presentation we made yesterday at the Dawson Public Power District in Lexington showed that for a typical installation on a residential on their rates it could be a simple payback of 18 years. Whereas for a commercial and ag, if they were able to get the REAP grant and the accelerated depreciation it would be more in the 7 to 11 years. And again, it all depends on what you pay for it. If you're not using simple payback and are calculating the interest costs and you have a higher price, it may never pay back. It all depends on what the original investment was. And I'd like to share a little bit about what NPPD is planning to do on the retail community solar projects. As was mentioned, Venango, Scottsbluff, and Kearney have interest and we're working with the developers and the communities to bring those projects forward. But again, it's very complicated. We want to work through this so that the municipals remain whole. Right now they receive a lease payment from NPPD. Rooftop solar goes in, that municipal loses that lease payment. But we want to work with community solar so that, in fact, they still maintain that revenue because that's, essentially, to their revenue base. Also, and our model that we're working on, is we want to maintain a wheeling charge or distribution charge. The idea is, you put this community solar on the edge of town somewhere where you can find some land, but it's still using the distribution system to get that power to the individual home. And it still maintains and helps that revenue. Otherwise again, if it goes on the roof, that's lost and that's why you see some utilities changing their rate structures to try to capture more a fixed cost through either a demand charge or a customer charge because if they put in solar they can lose that and it could be a challenge for the utility. And so, again, solar today is definitely more expensive. And our analysis shows now that if a customer signs up in our community solar program, they're initially going to pay more than if they would not. But in our program, it will be designed that they will be able to lock in to that rate for the 20-year period if they so choose. And assuming that that rate does not change and the utility rates continue to escalate, they could save money at the end. So it's kind of a gamble. But I think the big thing for us, in the community solar, is that in other states we found that there's some developers out there going door to door making promises that aren't good and, ultimately, creating a problem for the utility when they leave town. And so we believe that through our community solar, we can maintain a good relationship with our end-use customers. With that, I'd be willing to answer any questions. [LB1071]

SENATOR SCHILZ: Thank you, Mr. Rich. Any questions? So when you sat here and you talked about the...doing the community projects, that maintains it underneath...what Mr. Texel was talking about...maintains it underneath that energy supplier, utility, so that you don't run into problems where, like you said, that's essentially what you're saying, right? [LB1071]

DAVID RICH: Yeah. We are...NPPD is actually buying the output of the project. We're treating it as another generation resource. And then we are, through our retail division, selling that electricity. So I believe there's no issues with the process we're using. [LB1071]

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SENATOR SCHILZ: Probably a lot easier for folks on maintenance, stuff like that, if you've got people that, like you, that know what they're doing and deal with it every day. [LB1071]

DAVID RICH: Well, the first ten years, most likely, that it will be owned by a developer and we may, depending on the situation, do some basic maintenance and depending how that is, but the idea at some point in time, public power could buy it out if it would result in lower costs for us. [LB1071]

SENATOR SCHILZ: Very good. Any other questions? Seeing none, thank you very much for your testimony. [LB1071]

DAVID RICH: Thank you. [LB1071]

SENATOR SCHILZ: Further neutral testimony? Any other neutral testimony? Seeing none, Senator Haar, you're welcome to close. [LB1071]

SENATOR HAAR: Well first of all, I'd like to thank you, committee, for listening, for those who came to testify, to LES. And this is just coincidence, but my understanding is probably that solar farm will be in my legislative district. (Laughter) I'm hoping. And really visible from the Interstate, that's what we're hoping. So I want to say thank you. Couple things--Nebraska has a lot of cold days and a lot of sunshine on those cold days actually, perfect for solar panels. In the past, we've often heard--the sun doesn't always shine and the wind doesn't always blow, and I went to Google and I looked at the solar system diagram and the sun does always shine and the wind is always blowing somewhere. And so as time goes on, there's some technologies that are going to make solar and wind play even a bigger role than they're starting to do now. One, of course, is mass storage and we're beginning to see the development of mass storage of megawatts at a time and the advantage of that. If you could combine that kind of storage, for example, with solar, you can flip off batteries or...solar or wind, you know, you could charge batteries at night with the wind when the wind tends to blow more and during the day with the sun. And just in microseconds you can flip batteries off and on. So we're really looking forward to mass storage. Transmission, of course, is an issue, and there's...I've heard some talk again about super highway of transmission in the United States that could help balance out that sort of thing. And then as we start to see the smart grid where a meter will tell you when it's cheapest so that we can start to price energy with when it's cheaper and when it's not. And there solar could really play a big role again. There's some neat research going on at the University of Nebraska with solar cells that promise to be cheaper and take more of the sunlight and turn it into electricity than currently. Also, some research going on with mass storage and I'm glad to report that. Nebraska is really an energy-rich state as we begin to acknowledge; the third greatest wind potential in this country, the 12th or 14th, or whatever it is, greatest solar potential. We've got hydro; we've got bio with

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ethanol. And something we started to talk about is converting manure to methane which could not only save agriculture money, but could become a real source of energy. We heard earlier that we export a lot of Nebraska dollars to import energy. And I think if we look towards all our energy resources, we should be able to reverse that trend, keep much more of our energy money in this state and actually export the energy. So with that, solar is exciting; price is coming down, we're going to see a lot more of it in the future. And the industry is going to change a great deal because of wind and solar. With that, I'd be happy to answer any questions you might have. [LB1071]

SENATOR SCHILZ: Thank you, Senator Haar. Are there any questions? Seeing none, thank you very much for your closing. [LB1071]

SENATOR HAAR: Thank you. [LB1071]

SENATOR SCHILZ: Have a great day and that will end our hearing today for the Natural Resources Committee. We appreciate everyone coming in. Have a great day and have a good weekend. [LB1071]