

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: All right. Are we on? OK. Morning, everyone. We'll get started here this morning. For the safety of our committee members, staff, pages, and the public, we ask those attending our hearings to abide by the following procedures. Due to social distancing requirements, seating in the hearing room is limited. We ask that you only enter the hearing room when it is necessary for you to attend the bill hearing in progress. The bills will be taken up in order posted outside of the hearing room. The list will be updated at-- after each hearing to identify which bill is currently being heard. The committee will pause between each bill to allow time for the public to move in and out of the hearing room. We request that everyone utilize the identified entrance and exit doors of the hearing room. We request that you wear a face covering while in the hearing room. Testifiers may remove their face covering during testimony to assist committee members and transcribers in clearly hearing and understanding the testimony. Pages will sanitize the front table and chair between testifiers. Public hearings for which attendance reaches seating capacity or near capacity, the entrance door will be monitored by a Sergeant at Arms who will allow people to enter the hearing room based upon seating availability. Persons waiting to enter a hearing room are asked to observe social distancing and wear a face covering while waiting in the hallway or outside the building. The Legislature does not have the availability of an overflow hearing room for hearings which attract several testifiers and observers. The hearings with-- for hearings with large attendance, we request only testifiers enter the hearing room. We ask that you please limit or eliminate your handouts. Welcome to the Natural Resources Committee. I am Senator Bruce Bostelman. I'm from Brainard and I represent Legislative District 23. I serve as Chair of this committee. The committee will take up the bills in order posted. Our hearing today is your public part of the legislative process. This is your opportunity to express your position on the proposed legislation before us today. Committee members might come and go during the hearing. This is just part of the process as we have bills to introduce in other committees. I ask that you abide by the following procedures to better facilitate today's proceedings. Please silence or turn off your cell phones. Introducers will make initial statements, followed by proponents, opponents, and then neutral testimony. Closing remarks are reserved for the introducing senator only. If you are planning to testify, please pick up a green sign-in sheet that is on the table at the back of the room.

Transcript Prepared by Clerk of the Legislature Transcribers Office
Natural Resources Committee February 11, 2021
Rough Draft

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

Please fill out the green sign-in sheet before you testify. Please print and print legibly and it is important to complete the form in its entirety. When it is your turn to testify, give the sign-in sheet to a page or to the committee clerk. This will help us make a more accurate public record. If you do not wish to testify today but would like to record your name as being present at the hearing, there is a separate white, white sheet on the tables that you can sign for that purpose. This will be a part of the official record of the hearing. When you come up to testify, please speak clearly into the microphone and please speak loudly as well. You may remove your mask, tell us your name, and please spell your first and last name to ensure we get an accurate record. We will be using the light system for all testifiers. And for each bill, we'll see how many testifiers we have. It will either be three or five minutes. For the confirmation hearing, we'll have five minutes to make your initial remarks to the committee. When you see the yellow light come, come on, that means you have one minute remaining. On the red light, on the red light indicates your time has ended. And questions from the committee may follow. No displays of support or opposition to a bill, vocal or otherwise, is allowed at a public hearing. The committee members with us today will introduce themselves starting on my far left.

GRAGERT: Good morning. Tim Gragert, District 40, northeast Nebraska.

AGUILAR: Ray Aguilar, District 35, Grand Island and Hall County.

BOSTELMAN: And on my right.

J. CAVANAUGH: John Cavanaugh, District 9, midtown Omaha.

MOSER: Mike Moser, District 22, it's Platte County and bits of Stanton and Colfax Counties.

BOSTELMAN: Senator Moser also serves as the Vice Chair of the committee. To my left is committee legal clerk, Cyndi Lamm; and to my far right is committee clerk, Katie Bohlmeier. And serving with us today is-- Brytany, is Lorenzo with us as well?

BRYTANY GAMA: Lorenzo will be joining us in a few minutes.

BOSTELMAN: All right. OK, well, thank you for being here. And we'll make do as we can through the day. So with that, we will open our hearings. Our first one today is a confirmation hearing on the

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

appointment of Josh Andersen to the Nebraska Environmental Trust. Mr. Andersen, please come forward. Morning, Mr. Andersen, we'd just like you to tell us a little bit about yourself, why you-- is, is this an, an appointment, correct, or reappointment? Appointment.

JOSH ANDERSEN: Appointment.

BOSTELMAN: Why you would like to serve on the Environmental Trust, please.

JOSH ANDERSEN: OK. Thank you, Chairman Bostelman and members of the Natural Resources Committee. My name is Josh Andersen, J-o-s-h A-n-d-e-r-s-e-n. I live at 2080 Road 307, Edgar, Nebraska. This is in the heart of the Rainwater Basin, which is identified as a biologically unique landscape in the Nebraska Game and Parks' Nebraska Natural Legacy Project. The land use in this area is predominantly row crop agriculture, which is sprinkled with shallow elements. The combination of these wetlands and lush green from fields attracts one of the greatest wildlife migration spectacles on Earth. During the spring migration, you're likely to spot bald eagles, sandhill cranes, geese, teal, widgeon, gadwalls, mallards, and northern pintails, and the occasional whooping crane. It is estimated that these temporary visitors number about 8.6 million as they migrate through in just a few weeks in the spring. It is at this time when the males come into their full display of colors. Their colors pop as vibrant greens, blues, and rust. Are contrasted against jet blacks and snowy whites. Once our feathered friends have left and the fields have turned from brown to a sea of green, our landscape remains home to our resident wildlife. In the early dawn of dusk, you can hear the crowing and drumming wing beats of courting ring-necked pheasants, the emphatic whistle of a northern bobwhite quail, or the jolt of a gobbler from his nighttime perch. This is my home. This is where I was raised. This is also where my wife and I chose to return to raise our four children on our diversified family farm where we continue our family tradition of agriculture and land stewardship. I come from a family of serious conservationists. In 1924, my grandfather immigrated through Ellis Island, eventually landing in Nebraska to farm. It was after persevering through the Great Depression and the Dust Bowl, that my grandfather was awarded the Nebraska State Conservationist Award and the Nebraska State Tree Planner of the Year Award. My father was born on that family farm and he was the first to earn a college degree. In 1962 he left, he left Nebraska to work on the Mercury, Gemini, and

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

eventually the Apollo space program. After 15 years away from Nebraska, he returned to the family farm to raise his family. In about 1992, my father became a board member of the Rainwater Basin Joint Venture, where he served for roughly 15 years representing local landowners as he helped promote and implement many local conservation projects. I grew up with these two fine men and whether we were chopping thistles, planting and sharing trees, building bluebird houses or just spending the day in the great outdoors, I am grateful for the time I had with them and the passion for nature that they instilled in me. Similar to my father, I left the family farm to expand my horizons. After earning an engineering degree, I moved to Oklahoma, where I gained ten years of experience in private industry with experience in leadership, project management, and technical project and process development. I served in various capacities from research and development to management. I was responsible for managing budgets, people, and large projects. I authored three globally published technical publications, and I was awarded two U.S. patents. As a manager responsible for \$30 million a month business, I led a team which successfully doubled our manufacturing capacity, increased product quality, and worker morale, while at the same time reducing costs to meet new business demands. So now I'm fortunate enough to be back home in Nebraska with my wife and my four children on our family farm. Since coming home, I've served on several volunteer boards benefiting my community from Boy Scouts, County Extension Board, to our Rural Fire District Board. Sharing my love of nature, agriculture, my community, and balancing these important priorities using problem-solving skills is what interests me about the NET. As a returning farmer, father, licensed professional engineer, and active conservationist, I feel that my experience can serve some value in this capacity. I believe that agriculture and conservation are complementary interests. Our heritage, way of life, and communities contribute to the values and success of our future generations. These factors must also be considered in any long-term public commitment, including conservation efforts. Thank you for this opportunity and I would be glad to answer any questions if I can.

BOSTELMAN: Thank you, Mr. Andersen. What position do you-- will you be sitting on, on the Trust? Are you filling a, a-- an agriculture farming, a business manufacturer?

JOSH ANDERSEN: So there's, there's nine citizen members, three from each congressional district. So I would be sitting on as one of the--

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: OK. Are there subcommittees that-- have you met, have you met with the Trust already?

JOSH ANDERSEN: So I-- yeah. So I was appointed and I within about a week or two, I-- we had a first-- our first meeting, so I've attended one meeting and they also asked me to continue on for Mrs. Vinton, who her place is the place that I've been appointed for. She was the chairman of the Finance Committee, and so they asked me to continue that, so.

BOSTELMAN: OK. All right, thank you. Any other questions? Senator Cavanaugh.

J. CAVANAUGH: Thank you, Chairman Bostelman. Thank you, Mr. Andersen, for your willingness to serve and for being here. And you've got a tremendous resume. I was reading it last night. I was really impressed. In terms of how did you come to apply? Did you just decide to apply? Did somebody ask you to apply?

JOSH ANDERSEN: So I actually applied in 2016 and I wasn't chosen. But in the meantime, since then, I have expressed interest to other third district representatives that if they decided that they wanted to step down or needed to step down, that I was interested in, in filling that position.

J. CAVANAUGH: Thank you. And do you know if anybody else applied this time?

JOSH ANDERSEN: I don't know.

J. CAVANAUGH: OK. Can I keep going? So you said that you were appointed and then you went to one meeting. Was there any kind of onboarding before that meeting? Did they give you process? Did they tell you how it works?

JOSH ANDERSEN: So, yeah, I made a trip up to Lincoln. I think it was the week after the appointment. And I met with Director Brohman, our executive director, and he did an orientation with me probably an hour or so and briefed through the grant process, supplied me with a policy book, rules and regulations and state statutes. So obviously had to do some homework. So went home and started studying on those things and reached out to some other board members trying to get caught up to

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

speed. So that was kind of my background before going to the first meeting.

J. CAVANAUGH: And to back up, so I've asked this of everybody, what does the Environmental Trust do?

JOSH ANDERSEN: Their mission is to conserve, enhance, and restore the natural environments of Nebraska.

J. CAVANAUGH: And how do they do that?

JOSH ANDERSEN: Through-- allocating funding through a competitive grant process.

J. CAVANAUGH: Thank you. I just wanted to make sure that I'm--

JOSH ANDERSEN: Yeah.

J. CAVANAUGH: --being fair and asking everybody that question.

JOSH ANDERSEN: Yeah, no problem.

J. CAVANAUGH: So it sounds like you got a lot of information that you had to go to that first meeting, which was a week and a half ago, probably, something like that.

JOSH ANDERSEN: Roughly, yeah, probably.

J. CAVANAUGH: Did you vote at that meeting?

JOSH ANDERSEN: Yes.

J. CAVANAUGH: OK. And that was the meeting that was after the grant process, review process. And this came out of the grant committee with a score. And this was a meeting to adopt those recommendations or not. Right? Is that--

JOSH ANDERSEN: Yeah, yeah, this, this meeting, it was the meeting that the grants committee brought their recommendations to the board for their consideration. Yes.

J. CAVANAUGH: And the board considered them and voted on it.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

JOSH ANDERSEN: Yes. At that-- Title 137, I think it's Chapter 8, kind of describes that process fairly well. At that meeting, the board has-- they, they can either adopt or revise and adopt the recommendations from this grants committee. So that's the function of the February meeting.

J. CAVANAUGH: And so you've been interested for a long time, though not on the board. So presumably you've been an observer of the board.

JOSH ANDERSEN: Yes, I have.

J. CAVANAUGH: So did you observe last year how that grant process and that Title 137 section played out?

JOSH ANDERSEN: Actually, no, I, I had not attended any meetings last year, so.

J. CAVANAUGH: Did you read the newspaper articles that covered that?

JOSH ANDERSEN: Yes, I've seen a little. I don't know, you know, it appears, appears there may be some confusion. I don't know.

J. CAVANAUGH: I'm just asking if you--

JOSH ANDERSEN: Yeah, I, I heard a little bit about it.

J. CAVANAUGH: OK. So they-- you have this meeting, you have the, the recommendations. They report out an objective score of what the grants committee thinks. All of these-- basically trying to rank them in order of value to that environmental objective that you stated. Right? That's a fair definition of that. And then you have, I guess, did you have a discussion about those scores?

JOSH ANDERSEN: Well, that's-- the agenda item, I believe it was five, which is where the committee brought their recommendations forward for the board to consider, that would be the discussion portion. There's some Robert's Rules motions being made. Certain things have to happen the right way so that you can get discussion. But there, there was discussion, I guess that would be the opportunity for that.

J. CAVANAUGH: And then at this particular meeting, there were a handful of projects that were recommended for funding, and it looked

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

like about two of them were pulled off of the, the recommendations.
Does that sound right?

JOSH ANDERSEN: I believe there was three.

J. CAVANAUGH: Three that were pulled off from funding?

JOSH ANDERSEN: Yes, two were voted on because of merit. And the other one was withdrawn voluntarily, I believe.

J. CAVANAUGH: OK.

JOSH ANDERSEN: But we still had vote.

J. CAVANAUGH: So the grant applicant withdrew their request?

JOSH ANDERSEN: Yes, on one.

J. CAVANAUGH: OK. So as to the two that were voted on on merit, was there a discussion about the merits?

JOSH ANDERSEN: Yes.

J. CAVANAUGH: OK. And did you participate or just listen as the new guy?

JOSH ANDERSEN: No, I participated.

J. CAVANAUGH: OK. And the-- my reading of the two projects, one was the second highest scoring project. Does that sound right?

JOSH ANDERSEN: I don't, I don't know if that was the one that was voluntarily withdrawn or if, if you could, if you could refer me to the project, I'd recognize it.

J. CAVANAUGH: Well, OK, in terms of the projects, the three projects you're discussing, number one is The Nature Conservancy, which was--

JOSH ANDERSEN: OK.

J. CAVANAUGH: --the second highest grant project. Number two is the Lower Loup NRD, which is the withdrawn project.

JOSH ANDERSEN: OK.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

J. CAVANAUGH: And that was the third highest grant project. And then the Papio-Missouri NRD project, which was about the maybe 15th highest scoring project, was also elected not to be funded. Does that sound right?

JOSH ANDERSEN: Yes.

J. CAVANAUGH: So when having a discussion about the merits and whether a project is merited, I guess the question is, was there a-- you being a new guy, this is a new process to you, weren't you surprised that a project that could come out of the, the objective scoring project as the second highest scoring project was one that everyone voted or enough people voted to take off project to say it didn't merit funding then?

JOSH ANDERSEN: I, I kind of see what you're saying. I didn't take it that way. I took it more as the strength of the full board's review versus a small committee's review. There's certain people on the board that may have expertise in different areas. And, and it was such on, on these two grants you're referencing. So it's good to have the full board's purview of, of the, of the subject matter. And I think if, if you didn't do that, I think you're putting it all in the hands of either a ranking system or 6 people, and it kind of defeats the purpose of a 14-member board, so.

J. CAVANAUGH: Well, my interpretation of the ranking system is to be objective. Does that seem like a reason why you would have a ranking system?

JOSH ANDERSEN: Well, the, the ranking system is a tool to aid in the process, and that's specifically stated in our rules--

J. CAVANAUGH: Um-hum.

JOSH ANDERSEN: --and regulations. It-- it's, it's something that may be used. And it can be changed, I believe, through time, so if, if we have a problem with the way we're, we're ranking things, that's something that as a board, I think we have the power to address. And, and maybe that's something that we need to look at, but it, it is a tool.

J. CAVANAUGH: So that brings me to my next question then. Like I stated and you said you saw in the paper that last year there were, I

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

think it was five projects that were taken off that were-- had been ranked high enough to be scored. This year, there's two projects. The one's the second highest scoring. Was part of that discussion centered around what are the flaws in that ranking system that should be addressed so that this doesn't continue to happen?

JOSH ANDERSEN: No, the, the flaws in the ranking system, the meeting that I was at, no, the flaws weren't brought up in the ranking system. I think time constraints and having things on the agenda properly would probably limit that discussion. If it were to be had, I think it should be put on an agenda properly. But--

J. CAVANAUGH: Do you think that's a discussion that should be had then?

JOSH ANDERSEN: Yes.

J. CAVANAUGH: So a secondary question is, were there any projects that were not ranked or recommended for funding by the grant committee that were then funded?

JOSH ANDERSEN: Yes, there were in that, I believe there were seven, that were the immediate seven following the cutoff line from the original proposal from the committee. And the way I understand it is that the reason those seven were suggested to fund was because of the withdrawal of the \$650,000, the voluntary withdrawal of the \$650,000 project. And I think that was discussed prior to the board meeting that came as a recommendation from the committee.

J. CAVANAUGH: OK. So those projects were moved up after the voluntary withdrawal. Were there any projects that were suggested to be moved up that did not end up getting funded by the whole board?

JOSH ANDERSEN: Not that I recall, no.

J. CAVANAUGH: So there were no, no projects that anybody moved to add to that list that were discussed and then ultimately were denied moving up to the whole board?

JOSH ANDERSEN: Not that I recall. No, sir.

J. CAVANAUGH: OK. And again, you're the new guy, so this is probably a tough question, but it's one I've kind of been asking everybody. Do

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

you think that the department heads should be voting members of this board?

JOSH ANDERSEN: So part of the, part of the mission of the Trust, you know, had said conserve, enhance, and restore the natural environments. So that's, that's only the first sentence in, in the mission. But the Trust is also to complement existing activities in the state, and they're supposed to collaborate with public and private projects. So, I mean, I guess it's not my decision, but I find, I find value in the, the consistency with the mission statement bringing in the public aspect. So--

J. CAVANAUGH: I guess that's a fair answer. A lot of these projects are brought by governmental entities, one of them being that Papio-Missouri NRD, their government partner,--

JOSH ANDERSEN: Yes.

J. CAVANAUGH: --they're not represented on this board.

JOSH ANDERSEN: No, they're not.

J. CAVANAUGH: But the Department of Energy and Environment is often a grantee and some of these grants are a partner and they are represented on this board.

JOSH ANDERSEN: Um-hum.

J. CAVANAUGH: Do you think that there's the possibility for some inconsistent treatment of one entity or one grantee versus another when one of the grantees is directly represented on the board?

JOSH ANDERSEN: Well, I would hope not. And I would think that the other members of the board would hold some accountability there. But also Title 137 in Chapter 1 gives a directive to the agency directors. I believe it's if they're-- if there's a grant where they could receive 50 percent of the funds that they are to recuse themselves from voting. And, you know, that would be, I guess, would address what you're saying. But, you know, we have a lot of-- there's five agencies represented on that board. And, and quite frankly, each one of those agencies is directly affected by our natural resources in the state, whether it's DNR, NDEE, Department of Health and Human Services, they-- clean air, clean water. I mean that's right to the heart of

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

their, their issues, too. So, you know, Game and Parks, Game and Parks, in the last 15 years, I saw a report handed out at the meeting. In the last 15 years, Game and Parks is actually our largest grant recipient out of any, any receiving entity. So, yeah, there's agencies that are reliant on-- maybe not reliant, but definitely benefit from, from the, from the grant process. But--

J. CAVANAUGH: I've got a couple more questions. I apologize for continuing to--

JOSH ANDERSEN: No, you're fine.

J. CAVANAUGH: --dominate, but you're, you're answering my questions very well, so I appreciate that. And so the discussion you said that there's a necessity for that discussion after the grants, subjective grants scoring process that brings technical expertise that isn't necessarily present in the grants committee. My understanding is that there is a technical review for all grants to make sure that they're qualified for technicality before that they get to the grant scoring. Then the grants are scored and we don't have to belabor that point about how they're scored, but they're-- it's basically everybody gives a score and then you do an amalgamation of scores. Does that sound right? OK.

JOSH ANDERSEN: I think that's accurate.

J. CAVANAUGH: And there's room for discussion there. We had somebody testify that to appointment of this board last week about the necessity for that outlet of the discussion. And they-- their reason was that some people have a different opinion about the value of things. They didn't, I guess, describe it as a bringing a specific technical expertise, but more of an opinion to that level.

JOSH ANDERSEN: OK.

J. CAVANAUGH: Do you concede that there's a risk of opinions working their way in as opposed to technical review?

JOSH ANDERSEN: Sure, there's 14 members--

J. CAVANAUGH: Right.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

JOSH ANDERSEN: --who all have opinions, different walks of life and sure.

J. CAVANAUGH: So as to opinions, what's your opinion of the value for environmental preservation of land acquisition or easements?

JOSH ANDERSEN: Well, acquisitions and easements are certainly a tool that is used and can be used in achieving the mission of the Trust. But remember, it's, it's one tool or in this case, two tools, so each project needs to be looked at objectively and individually, and if that tool the tool that's being prescribed by the applicant, then they need to be looked at and judged, not judged, but ranked or evaluated accordingly.

J. CAVANAUGH: And some projects get a score. The score partly is about the durability of their effect, right?

JOSH ANDERSEN: Yes.

J. CAVANAUGH: And so the person who testified last time said that the land acquisitions get a higher score because of the length of an acquisition, because it goes on longer. Was that part of the conversation around the Papio NRD project that it was since it was a land acquisition, it had been over-scored.

JOSH ANDERSEN: No, the, the issue-- now, I can't-- I'm not going to speak for the board. This is-- these are my observations as a new member.

J. CAVANAUGH: And if you don't the answer, don't-- you don't--

JOSH ANDERSEN: No, no, I, I have no problem. The-- one of the main issues with that grant was that it was an acquisition-only grant, at least the funding portion from the NET was acquisition only. So you look at the budget expenses, there's no labor, it's just-- it's acquisition. So the grant, the grant was when, when we ended up doing the quick check on acres, you know, dollars per acre purchase price, it was about \$8,100 an acre, is what the grant was for. And the appraisal was for \$6,100, roughly. So there was about a million dollars extra in that grant. And that was an issue. And, you know, that was the main, the main topic. So--

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

J. CAVANAUGH: That's certainly a fair assessment or critique. How come that didn't get caught in the grant review process?

JOSH ANDERSEN: That's great question. The grant review process, I've never been through it, but I've, I've tried in a short period of time to get through as much as I could before that meeting. There's got to be about 10,000 pages of grant material from all the applicants. And it'd be very difficult to get through all that if you're not on the grants committee, because that's a lot of time you're going to take out of your life to do that. So the grants committee does the lion's share of that work. So it's a good question how that could get missed. I mean, maybe there's a policy. Maybe there's-- I did ask a question about whether we do-- whether the trust has a policy of only appraised value using appraised values. I was told that, yeah, kind of loosely, but I haven't found that policy yet really written, so I don't know, you know, it, it just-- it was enough of a difference that it caught people's attention, though. And, and that's where you can get, you know, maybe some outside expertise from the other board members looking in. Hey, kind of interested to look at that. Maybe I'll just take a quick peek and you catch something that might be worth talking about. So the sumac control one was the same way.

J. CAVANAUGH: Thank you, I appreciate the answers.

BOSTELMAN: Sorry, I'm sorry. Senator Moser.

J. CAVANAUGH: I'm good.

MOSER: So the grant committee kind of previews these applications and looks them over to see how they think they what their potential is, but is there a value added from that coming to the full committee? Do you think that you should just approve applications based on what the grant committee says rather than the whole board, or does the whole board add--

JOSH ANDERSEN: The whole board--

MOSER: --something to the process?

JOSH ANDERSEN: --adds value, the whole board adds value to the process. Yes. I think that's the intent of the process.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

MOSER: And sometimes the whole board has different opinions than what the grant committee has.

JOSH ANDERSEN: Yes.

MOSER: And are there people disappointed with in any process,--

JOSH ANDERSEN: Yeah.

MOSER: --what got funded and what didn't?

JOSH ANDERSEN: Yes.

MOSER: Yeah, I, you know, I'm kind of asking you questions, too. There's no process, I think that's perfect. There's always a little bit of subjective consideration in any project and sometimes people aren't happy with the projects they picked, but we set the process up. You did it legally, you did it in an open meeting and then to come back and complain about how the processes worked, you know, I think is, is not helpful. I think if we want to change the process, we should change the process rather than pick on people who come to apply for the job. Thank you.

BOSTELMAN: Senator Gragert.

GRAGERT: Thank you, Chairman Bostelman. And thank you for your testimony.

JOSH ANDERSEN: You're welcome.

GRAGERT: Very impressive resume.

JOSH ANDERSEN: Thank you.

GRAGERT: But I bet you can't believe there's still another question out there.

JOSH ANDERSEN: No, you're fine. Take all the time you need. I drove a long way to get here. I'm happy to, I'm happy to answer.

GRAGERT: But I just, I just want, you know, it may be already, but to sum it, sum it all up is I, I truly believe there's not a perfect process. I haven't seen one yet. But I would like your, your opinion of the process, the overall process of what you go through. And are

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

there any glaring, after your short time spent there already, are there any glaring things that you will work possibly to encourage change on?

JOSH ANDERSEN: Sure, that's a fair question. Having a limited time there, I've seen things that I think definitely use improvement, we've got some issues on the finance committee that we've got to get cleaned up. We're not, we're not looking at our grants disbursements close enough. We don't have a good handle on that. And that is our fiduciary responsibility to the public and to our grant recipients. So I've been part of that process already, so. And we're working with the staff on that. I think the-- so, so there's a-- so the-- Senator Cavanaugh was talking about the technical committee. Now, I haven't been personally through this grants process myself yet as far as on the committee, but I do understand that there's a technical advisory committee that should catch some of these types of things, you know, like we were talking about. I asked for us to see that committee list and it surprised me as a person from the outside, now maybe this is normal, but surprised me that the majority of people on that list were either from Game and Parks or from other agencies or organizations that receive grants. So I think that's something that we should look at going forward. Are these, are these people being utilized in a way where we don't get bias on the initial evaluation of, of a grant? Don't-- I'm not saying that they have been, but it sure sticks-- stands out to me. Then our grants process, our grants process, I think needs to be communicated more clearly to both grant recipients and the public. I actually, long time ago, wanted to put in an application for our farm to the Environmental Trust, and I was told I couldn't do it because I was a public citizen. So since then, I've grown up and I've read the book. And it does say in there that private citizens are considered just like anyone else, whether it's a conservation organization or a state agency, you know, you're welcome to apply. And I think we're lacking some, some transparency there that this is, this is for the public, this is for Nebraska's good, us, the people that live here, you know, the farmers, the ranchers, the people that-- the, the recycling centers. I mean, we just-- we've had some-- we've really struggled to site some recycling projects in Omaha. And I don't know why, but we just can't get the projects off the ground. But all these things are important. And I think we need to do a better job of communicating that vision and that mission to the rest of the people in the state. So--

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

GRAGERT: Thank you. Yeah, you know, anywhere or anything you do, communication will always be the weak link. And I appreciate you bringing that out. And, and, and hopefully educating, you know, the public on what you actually do would be a great thing, too. So thank, thank you again.

JOSH ANDERSEN: Thank you. Well, I, I think we should, I think we should concentrate where the Trust mission and community support come together. And I think we can build good consensus that way. And I think we can build good rapport with the public that way, too.

GRAGERT: Thank you.

JOSH ANDERSEN: You're welcome.

BOSTELMAN: Seeing no other questions, thank you, Mr. Andersen, for your willingness to serve and for being here today.

JOSH ANDERSEN: Thank you.

BOSTELMAN: Yes. Would ask anyone who would like to testify as a proponent for the confirmation for Mr. Andersen, please step forward. Welcome.

KYLE KINYOUN: My name is Kyle Kinyoun, K-y-l-e K-i-n-y-o-u-n. I live in rural Clay County. Known the Andersen family my whole life. A matter of fact, I taught Josh and his dad hunter safety when Josh was 11. His whole family have been conservationists. And I can't think of anybody that could represent our district, our area on the board than him. I've been a lifetime conservationist. I have been-- I was one of the original B team-- local coordinator for the B team meeting for the Rainwater Basin Joint Venture. So I've seen projects. I'm well aware of how wetlands should be taken care of. I manage several wetlands myself and I have not been solicited or paid to come here and testify. I just don't think that you can do-- find anybody better than Josh. And I'd be more than happy to answer any questions if you have them.

BOSTELMAN: Thank you, Mr. Kinyoun. Are there any questions? Seeing none--

KYLE KINYOUN: Thanks for the opportunity to testify.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: Thank you for coming in today. Does anyone else like to testify as a proponent for the confirmation of Mr. Andersen? Seeing none, would anyone like to testify as an opponent in opposition? Seeing none, would anybody like to testify in neutral capacity? Seeing none, this-- we do have a-- let's get it here, a letter, a written testimony, proponent from Jay Ferris, Nebraska Farm Bureau and, and Nebraska Cattlemen. And we do have position letters, proponents: Clay County Board of Supervisors; Dawn Caldwell; Nebraska Sorghum Producers Association; Rainwater Basin Pheasants Forever; Renewable Fuels Nebraska. Opponents: Christine Hodges and Lorrie Benson. And that will conclude our hearing on the confirmation of Mr. Joshua Andersen to the Nebraska Environmental Trust. Thank you for coming today. Next, I'd invite Senator Flood to come forward, as we will open our hearing on LB650.

FLOOD: Good morning, Chairman Bostelman, members of the Natural Resources Committee. My name is Mike Flood, M-i-k-e F-l-o-o-d, and I represent the 19th Legislative District. I'll first preface my testimony today by offering an amendment to the committee for the purposes of clarifying language and the intent of LB650. I also want to let the committee know that this bill is the result of an extreme amount of collaboration among many parties and individuals. And after my testimony, you're going to hear from Troy Bredenkamp to discuss the impact to the ethanol and agriculture industries. You're going to hear from Hal Demuth to discuss the technical aspects of wells and groundwater safety and Charles Gorecki to discuss the policy framework to name a few. The success of our state lies in leveraging the best of Nebraska, its people, resources, and work ethic with innovative ideas and businesses. LB650, the Nebraska Geologic Storage of Carbon Dioxide Act does just that, employing the best technology in the world right here in Nebraska. We are creating and expanding markets for Nebraska products both nationally and internationally. Reducing carbon emissions from industries like electricity generation, ethanol production, and manufacturing by capturing the carbon dioxide they produce and preventing its release into the atmosphere has the dual impact of increasing market share for low-carbon products, but also addressing the climate issue in a proactive, quantifiable way. A critical piece of commercial carbon capture is the secure storage of captured CO₂. LB650 establishes the legal and regulatory framework in Nebraska for the sequestration of CO₂ deep underground. From the outset of today's hearing, I'd like to emphasize a few key points.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

First, the authority for permitting and safety of underground CO2 injection wells used for secure storage of CO2 lies within, solely within the Environmental Protection Agency. This bill does not diminish or alter the safety measures provided to the existing EPA processes in any way. To the contrary, this legislation supplements and reinforces the existing EPA process by defining property rights and providing additional state oversight over CO2 storage facilities. The EPA regulatory process comes with some technical language. The EPA classification for these wells, for, for these wells under the Underground Injection Control program, or UIC. A program of the federal Safe Drinking Water Act is Class VI wells. Experts today will use that terminology in their testimony. Second, the policy framework for regulation and property rights clarified in the bill, while new to Nebraska, are not original. They are based on guidelines and recommendations from the internationally recognized Interstate Oil and Gas Compact Commission. And this legislation incorporates the experience of states including North Dakota, Wyoming, and Louisiana that have already adopted similar legislation and policy. A letter from Bob Van Voorhees, nationally recognized legal expert in this area, has been submitted for the record as he is unable to join us today. The CEO of the Energy and Environment Research Center at the University of North Dakota is present at today's hearing and has firsthand experience with similar policy in other states. Third, I recognize that for many of us, including myself, the technology involved in deep geologic storage of CO2 is unfamiliar, and the nature of storage reservoir is 3 to 10,000 feet below the surface can be difficult to conceptualize. Fortunately, I am followed today by nationally recognized experts who have made careers in this field, including Dr. Matt Joeckel, Nebraska State Geolo-- Geologist. This is Adult Swim, ladies and gentlemen. I am pleased that they are lending their expertise to this hearing. Finally, I want to emphasize that I, along with every Nebraskan, understand the importance of groundwater protection and the stewardship of Nebraska's natural resources, especially water. The goal of LB650 in the long term is to improve the quality of our global environment while expanding market value of Nebraska products. Underground injection technology has been utilized at commercial scale for a variety of purposes safely for decades, including in Nebraska. There are several engineers who follow me today to provide expertise to that fact. Good public policy advances the goals of many interests at the same time. This bill, LB650, establishes the framework for Nebraska to seize upon the opportunity

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

to be a national leader in both low-carbon market economy for Nebraska agriculture and industrial products while addressing climate change at the same time. When I think about keeping and recruiting young innovators in our state, using technology to simultaneously solve problems and create economic opportunity is exactly the kind of policy they are looking for in a place to call home. In order to take advantage of these opportunities, we must establish a state policy framework that is both clear and transparent, which would allow private industry to employ innovative problem-solving, grow our economy, protect our environment. That's exactly what this bill does. And I want to add this. One of the biggest reasons this bill appeals to me and this concept appeals to me is that the climate change discussion as it is happening across the United States has states like California on the West Coast and other East Coast states prioritizing energy sources that meet climate-friendly guidelines. And if we are allowed in Nebraska to sequester CO2 deep underground and to do it safely as permitted by the EPA, when Californians are buying ethanol to use in the, in the, the energy continuum out there, they're going to, if we do this, they're going to look at Nebraska and say that's the ethanol that we want to buy. And at the end of the day, if we can do this, a farmer in central Nebraska or in northeast Nebraska, a farmer in our state, hopefully we'll get a better price because the ethanol that's created is doing everything in its power to meet the guidelines that states like California impose. And a lot of our ethanol rides a train all the way to the West Coast. And the more we can market that and do the environmentally right thing as permitted by the EPA, the more money our farmers will make. And that's, I think, the deal that is most attractive.

BOSTELMAN: Thanks, Senator Flood. Are there questions from committee members? Senator Moser.

MOSER: Do you find that this process would appeal most to ethanol producers?

FLOOD: Well, I, I think electricity generation, which I'm not any expert in, has, has been interested in this as they work to meet all the, the climate safety guidelines and rules and laws out there. Certainly, what attracted me the most to it is the, the application for ethanol, because it drives our economy so much. And when I first started looking at this bill, corn wasn't at \$4.50 a, a bushel. And, and I thought anything we can do to make ethanol more attractive in,

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

in a volatile economy would be good for Nebraska farmers. And so my primary reason for doing this is ethanol, but it has a number of different ethanol applications and it also could apply to industry.

MOSER: Thank you.

FLOOD: The other thing I'd add, Senator Moser, is that the geologic formation underneath the subterranean, the ground across Nebraska varies from one part of the state to the other. You can't just do this anywhere. You have to have the right terrane-- subterrane to be able to capture CO2. And so not every-- this will not qualify for every plant in Nebraska.

MOSER: Otherwise, it'd come fizzing up from the below.

FLOOD: I don't use words like fizz with a bill like this, but I appreciate it.

MOSER: Adding CO2 to water makes fizzy water.

FLOOD: Yeah.

MOSER: Thank you.

FLOOD: Thank you.

BOSTELMAN: Senator Hughes.

HUGHES: Thank you, Senator Flood, for bringing this bill. This is very intriguing to me. So you partially answered my question, but what areas of the state, have you looked into that, what areas would be adaptable to this process?

FLOOD: Well, you'll get more testimony on that, but my sense is that you might live a lot closer to an area like that than I do. Certainly, there's favorable subterranean areas in parts of central Nebraska. And with some of the experts that are coming behind, they'll have a better idea of what southwest Nebraska would look like. I do know that a lot of tests have to be completed and obviously through the EPA process before it's even considered. But this would allow somebody to start doing the testing.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

HUGHES: So this, this process probably would be or this opportunity to capture carbon dioxide would probably be best suited to areas of where there's oil and gas production in the past. And we have proven that we can extract those products and also reinject the salt water that comes up with a lot of those completely safely not having any, any contamination of our aquifer at all, is that kind of your understanding?

FLOOD: I think that's a pretty good assessment.

HUGHES: OK, thank you.

BOSTELMAN: Senator Cavanaugh.

J. CAVANAUGH: Thank you, Chairman Bostelman. Thank you, Senator Flood, for being here and for bringing the bill. This bill creates among a number of things, but one of them is at the end of the lifecycle of the storage facility, the state would then take over ownership of that cavernous space storage. Is that right?

FLOOD: Yes, that is right. And I, I, you know, that was one question that I had, too, when I looked at this and first of all, the storage of CO2 in deep geologic formations, it's intended to be safe and stable in perpetuity.

J. CAVANAUGH: Intended to be.

FLOOD: Intended to be. Yes. Over the course of a century, as we know, companies come and go. And that is why you see the language in the bill about the state. The EPA permitting process requires financial services-- financial assurances for the long-term stability and for the long-term liability as part of their process. So there is a process through the EPA that recognizes that this is an issue. But in the bill you see that the state of Nebraska is-- well, in the event the CO2 in the storage has value, that value should belong to the state of Nebraska and, you know, that's something I think the citizens should know. I mean, it cuts both ways. The other thing I would say that financial assurances are met by the establishment of the trust fund to cover state expenses for perpetual ownership. So we are collecting money along the way in the event there was a situation where there was an issue. But conversely, if there is value to that, the citizens would own that.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

J. CAVANAUGH: And maybe this question is for the other people about what the potential value is. But in terms, I mean, the financial backstop is good with the trust fund, it-- wouldn't that still potentially be existing if the state didn't take over title and we just had that backstop as an assurance to the feds as long as the, the company owned it and then once the company defaults and the backstop could step in, isn't that kind of how Superfund works and those sorts of programs that act as a backstop?

FLOOD: Well, I think, I think reasonable people could, could see that differently. And I'd have to think about whether that would be an amendment that I'd be open to. I think at the end of the day, you know, the citizens of this state don't want to lose control of our groundwater rights, obviously. We want to maintain the, the property right of that water. I think if the financial assurances exist to make sure that we aren't going to be suffering under some bill that we can't pay, that the citizens are probably in a better position to regulate this if that becomes the-- remains the property of the state. And so I can, you know, I see it a little differently. But I understand what you're saying, I-- there's no part of me that wants the state to be on the hook for some unfunded Superfund that we have to go in and clean up. And I think the EPA regulatory framework is very-- it has the state's interests in mind, and that's the, the establishment of the trust fund.

J. CAVANAUGH: A separate question about the land, control of the land, there's a section in here about how to when you gain 60 percent control then of a, of a cavern or facility or whatever you want to call it, storage facility, then that can force the sale of the rest of the property or the-- if you have a neighbor who's not willing to sell. Does that sound right? I guess, is that a fair description of it?

FLOOD: Yeah, I mean, a couple of points here. It's in the public's interest, I think, to store CO2 geologically. And so allowing one landowner to object is, is not in keeping with where I think we want to go as a state. This is the standard practice in the oil and gas industry, among other UIC projects. The owners will be compensated fairly, which is important. The reservoir space is not empty space. And this is a point that I really thought about, absent a reservoir, there is no other use or value which is being compromised. This is not something that's currently contemplated by anybody and you know. And

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

at some point, a single owner can't hold up a single project, and that's the purpose of the 60 percent.

J. CAVANAUGH: And admittedly, that's a tough problem to solve. Right? It's trying to figure that out. I guess my concern is, of course, forcing somebody who doesn't want to be a part of something to have what is a potential. And, and I understand that the part about it not having value, but the, the risk associated is probably where my mind goes when somebody says I don't want to be part of this because of the potential risk. And we can have a conversation with the experts probably about [INAUDIBLE] risk. But the question then is, is there an appeals process or what happens if I don't-- if, if you buy 60 percent of my neighbors and I am holdout and then you make a determination that I obviously am part of this now, can I appeal it in some way? Do you know?

FLOOD: Well, anytime the state sets up a process, there's always the right of due, you know, you have a right of due process that you can question the process that was set up to get to the 60 percent. But, no, we don't have anything built in specifically. You know, I think, to your, to your bigger question about this. There's no debate that climate change is impacting the economy of the United States and environment-- environmentalists in blue states are driving policies that are prioritizing the sequestration of carbon and they're making it financially attractive for industries that produce carbon or have these emissions to do it. And they've driven the conversation. The EPA has set up a process that is safe. And the question is, are we going to let our farmers or industries get with the program on the coasts that make our products more attractive than the state of Kansas' or the state of Wyoming's? And I think that if a majority of Americans that have adopted these policies have the Environmental Protection Agency setting up an entire process and we're essentially setting up a regulatory framework around it, we're doing what the national discussion on climate change wants us to do. And if we don't do it, that's fine. Other states will do it. And I think it's a question for environmentalists and that is, do we want to do this? And, and, and if your motive is to make more money selling ethanol, if your motive is to, to do climate change, this is one of those unique spots where we're on the same page.

J. CAVANAUGH: OK.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: Senator Moser.

MOSER: So would these companies that want to inject the CO2 get a lease on ground, or would they buy the ground or they get the mineral rights, or, or would the owner of the property be able to keep the irrigation rights? Are those separate from the mineral rights?

FLOOD: Well, right now, we don't have any property right in this subterranean 5 to 10,000 feet below the earth, and this would allow a--

MOSER: Current law doesn't delineate that that's--

FLOOD: It's not something that's been complemented. It's, it's this-- you know, we, we don't have formed law on like we do for oil rights or mineral rights and stuff. So this would be the right to use this if it's geologically appropriate, subterranean level of the earth to be able to store safely CO2. And that's probably the major thing this bill does, is it allows somebody that emits right now CO2, you know, to safely pump it into the ground and, and capture it 5 to 10,000 feet below the surface. I guess, it doesn't have to be 5,000 feet, could be 4,000.

MOSER: Well, wherever the geological formation allows it.

FLOOD: Right.

MOSER: You're not going to pick it by the footage. You're going to pick it by the, the way the rocks lay that they want to use to protect the, the CO2 to keep it underground. So back to the original question, though. Would they buy the mineral rights or how would they compensate the landowners? And what use of land could the landowner use or what could he use his property for if he's going to lease it to this [INAUDIBLE]?

FLOOD: Well, right now, if I own fair acres here, I obviously own the surface of the earth, which is the topsoil. And if I'm farming it or if-- let's say I'm-- I, I run an industrial plant, I own the ground until it gets to the groundwater and then the citizens of the state of Nebraska own the water. And then underneath that water, the-- our law is not formed on the idea of the property right in that subterranean area for the purpose of CO2 sequestration.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

MOSER: And then does your bill address that?

FLOOD: My bill, my bill does address that. It makes that ability to, to control that property down there for the purpose of CO2 sequestration, the, the providence of the person who owns the, the land up above.

MOSER: So it may be that the company who is producing the CO2 already owns the ground over top of the--

FLOOD: Right.

MOSER: --where they're going to inject it.

FLOOD: I'm not, you know, my bill, my bill and this has been talked about with other projects about taking the CO2 and set it in on some pipeline. That isn't what I'm talking about here. I'm talking about taking it off the top of the bin that's making the ethanol and putting it right into the ground on the same site.

MOSER: OK, thank you.

BOSTELMAN: Senator Gragert.

GRAGERT: Thank you, Chairman Bostelman. Thank you for your testimony, Senator Flood. I'm going to ask this question of you and, and, and maybe one of your experts behind you can fill me in because I won't know which one. I don't want to ask it four times. So are you familiar with the EPA and, and-- I know you're familiar with EPA. Can the EPA stop a project without there being an actual point source pollution or does it have to-- does, does the EPA wait until there is a pollution problem and then come in and stop a project?

FLOOD: I'll let one of the experts ask that question as to that.

GRAGERT: OK. And the next, the other question I had was the, the commission in the bill, the commission determines the amount of injected carbon dioxide into the reservoir--

FLOOD: Yes.

GRAGERT: --stored in the reservoir? Who actually is going to make up this commission? Who-- what's this commission going to be made up of?

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

FLOOD: Let me have one of our folks coming behind us. I want to-- or I'll get that question answered in your closing. I need to have the bill in front of me so I can go through that. But it's a good question.

GRAGERT: Thank you. Thank you.

FLOOD: You bet.

BOSTELMAN: OK. Seeing no other questions, thank you, thank you, Senator Flood. You're going to stick around for closing?

FLOOD: I will. I'm going to go back and forth between Revenue, but thank you, I will.

BOSTELMAN: Understand. Would like to ask anyone who would like to testify as a proponent for LB650 to please step forward. Morning.

TROY BREDEKAMP: Good morning, Chairman Bostelman, members of the committee. My name is Troy Bredenkamp. I am the executive director of Renewable Fuels Nebraska, the trade association representing Nebraska's ethanol industry. Our state's twenty five ethanol plants have a capacity to produce 2.6 billion gallons of ethanol on an annual basis, ranking us second in the nation. And we are proud that Nebraska's ethanol industry contributes some \$5 billion to annual state economy. RFN's members come before you in strong support of LB650, the Nebraska Geologic Storage and Carbon Dioxide Act. Others behind me will go into more scientific detail on the geologic sequestration process. I'm here to discuss why this issue and technology is becoming increasingly important to Nebraska's ethanol industry. In order for you to understand that, it is important to discuss carbon and the role that Nebraska ethanol can play in lowering carbon emissions. The concept of lowering carbon emissions, particularly in transportation and energy sector, is becoming an ever increasing national issue. Many states, such as California, have already adopted a low-carbon fuel standard, or LCFS. Other states and regions are considering some form of low-carbon standard. And of course, everyone knows the Biden administration is strongly advocating for decarbonizing the electric sec-- or the energy sector. You may know that ethanol is a source of renewable energy, but you may not know that it is a naturally low-carbon fuel source and getting lower all the time. A recent study of researchers from Harvard and Tufts

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

University reported that, that, that when accounting for current corn-growing practices and ethanol plant efficiencies and technologies, today's corn-based ethanol is 46 percent less intensive. Or to put another way, has a 46 percent smaller carbon footprint than that of conventional gasoline. With Nebraska's golden triangle of corn and cattle in close proximity to ethanol production, much of Nebraska's ethanol is even better than that of what researchers have discovered from a carbon reduction or footprint perspective. States like California are striving to lower and lower carbon intensive energy, and much of Nebraska's current ethanol is marketed to California to meet their LCFS. As a matter of fact, about 70 percent of the carbon credits being generated in California in that low-carbon fuel standard market is liquid renewable fuel such as ethanol and biodiesel. As carbon reductions are increasingly sought in states and regions with a LCFS, Nebraska's low-carbon ethanol will become more and more marketable, more valuable, more important. As an industry, there is an ongoing research that shows great promise when it comes to continuing to lower ethanol as carbon footprint. It is not out of the realm that there is a day in the not too distant future where through advancements in farming and ethanol plant production technologies, ethanol could be one of the only negative carbon energy sources in the world. LB650, with establishing the ability to geologically sequester CO₂, could play a significant role in our industry's drive to become a negative carbon energy source. Until that time, the provisions in LB650 would be a significant tool in our toolbox for those ethanol producers in Nebraska who market their ethanol into low-carbon fuel standard markets and are striving to constantly reduce the carbon footprint of their production process. For these reasons, Renewable Fuels Nebraska and its members are in strong support of LB650. We would urge you to support and move this legislation to the floor. And I thank you for your time and would be happy to answer any questions you may have.

BOSTELMAN: Would you spell your name for us, please?

TROY BREDEKAMP: I'm sorry. Troy Bredenkamp, B-r-e-d-e-n-k-a-m-p.

BOSTELMAN: Thank you. Are there any questions from committee members? Seeing none, thank you for your testimony.

TROY BREDEKAMP: Thank you.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: Ask next proponent to please step forward. Good morning.

HAL DEMUTH: Good morning, Mr. Chairman, members of the committee. My name is Hal Demuth, H-a-l D-e-m-u-t-h. I'm here to testify and representing myself and my company, which is called Petrotek Corporation, because we do a lot of work in Nebraska. We do a lot of work with UIC issues. And I see this as a very positive step forward in terms of the state of Nebraska in carbon storage in general. I have degrees in petroleum engineering, a bachelor's, a master's degree in hydrogeology and 39 years experience in oil and gas production, groundwater characterization, groundwater cleanup, ISR mining operations in subsurface flow related to deep injection wells. Because we're here to talk about carbon storage, the ultimate end game on carbon storage is deep injection wells. So I won't be testifying about the process of how do you get the carbon or about the legal aspects, but rather what do we do with the carbon at the end? Water deep injection wells, how do they work? And, and hopefully address some of the concerns in terms of groundwater issues, those kind of things. As a child growing up in, in northern Mexico and Colorado, water is, is very near and dear to my heart. It, it has a huge impact on our life day to day. I currently live about 30 miles west of Denver. We-- our family exists on well water. For a number of years, I had a small farm outside of Bridgeport and I learned the value of irrigated farmland versus dryland farming. So water's-- in protection of water, use of water has been near and dear to my heart for, for all my life. Approximately 70 percent of the business that, that my company currently does is underground injection wells. And so this is something that we do all day long every day. Underground injection wells are regulated by the Safe Drinking Water Act, as Senator Flood mentioned, and the UIC program, in particular. And one might ask, well, if it's Safe Drinking Water Act, why are we allowing you to inject things under the ground? And the reason is that prior to the Safe Drinking Water Act, there was no control over underground injection wells so people could inject whatever they wanted, whenever they wanted, however they wanted. And that-- well, there was a real concern in terms of groundwater protection. So the UIC program, the, the foundation of the program is protection of shallow groundwater and drinking water sources. There's various classes of those wells. Class I wells are industrial wells. That could be chemical plants, it could be refineries, it could be mining operations. Class II wells are E&P, oil and gas produced water. Class III wells are ISR mining, such as

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

the Crow Butte operation in Dawes County. Class V wells is kind of general categories which can include even septic systems. And then Class VI wells is the new category, which is carbon dioxide storage wells. We work in all those arenas. We work in 17 different states. And so what I'm here to talk about is just the, the technology and why that applies to Nebraska, why it's good to leverage current CO2 sources that you have and then be able to utilize that not only from the standpoint of carbon capture, but also another revenue stream for potential, you know, farmers in the business. I worked on the first Class I UIC permit in Nebraska at Crow Butte. I supervised drilling the well. I supervised drilling the second well. We've worked on their groundwater systems for the past 20 years. And as I said, the, you know, the premise of UIC is protection of USDWs or groundwater systems. So in the permit process you have to demonstrate that you are going to protect groundwater and we can talk some more if you have questions about that. Class VI wells require that you demonstrate long-term storage in terms of geologic containment, containment due to construction of wells, etcetera. It's a very rigorous program. It's thorough, it's protective. And again, the premise is protection of groundwater sources. Nebraska has many CO2 emission sources that could be leveraged, obviously. And just quickly, one question that was asked earlier about can the EPA stop a permit? Yes, they can before, during, and after. And we can talk about that a little more, Senator.

BOSTELMAN: OK, thank you, sir, for your testimony. Are, are there questions? Senator Hughes.

HUGHES: Yes, thank you very much for coming today. Very interesting. So how, how do you determine the capacity of a strata and how far it will go? How, how is that determined to find a-- to drill an injection well to begin putting CO2 in and walk me through that, if you would?

HAL DEMUTH: OK, thank you, Senator. We start with the regional geologic studies and, and those can either be a U.S. Geological Survey, or in many states, the State Geological Survey and, and the state geologist can talk some more about that. So there's regional geologic studies that describe geology, hydrology of, of large groundwater systems. From that, then we'll go to the local data. And often that's oil and gas exploration holes where they'll run geophysical logs. And that'll give us some idea of the strata. In some cases, if they ran the right logs, it'll give us an idea of porosity. From that, we may be able to determine permeability. And from that,

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

we'll run our initial calculations in terms of capacity, the formation, and also the area during which the, the injection fluid in this case, CO2 would go. Ultimately, you've got to drill a well to test it. And in this case, Class VI wells are regulated by EPA. You've got to prove to EPA that you've demonstrated confinement, that you understand how far the CO2 will go. You'll understand how you will confine it. And EPA has the regulatory authority to say no. They, they and there, there are specific guidelines in the UIC program. There's also language of up to the discretion of the director. So the director has a lot of authority to say, you know, I don't think you've proven this point. Go back to the drawing board. Now that can-- you've got to make sure that's not a, a never-ending do loop. But you-- we have to prove to the regulatory agency that it's safe before you can even go drill your injection well.

HUGHES: So is-- and just is carbon dioxide, I'm assuming it's a gas that you're injecting, not a liquid?

HAL DEMUTH: It is a, it is, is a supercritical gas, which, which is, is kind of behaves as a liquid, but it is, is kind of a combination of a gaseous form.

HUGHES: So is it heavier than air or lighter than air?

HAL DEMUTH: It, it will be lighter than air in the coming off the stack if you've got emissions. It will be slightly lighter than water when you inject it in a supercritical state.

HUGHES: OK. So just explain just a little bit about correlative rights in regards to oil extraction and how that would work for an injection, you know, with neighbors around an injection well.

HAL DEMUTH: I'm not a lawyer nor an expert in, in mineral rights, so I'll qualify that. Certainly, that would need to be addressed if it was depleted oil and gas zone or if it was a currently producing oil and gas zone. What, what is contemplated for the majority of, of this bill is really brine storage, and that means storage in a brine reservoir, which is not currently used for another source.

HUGHES: OK, thank you very much.

HAL DEMUTH: Um-hum.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: Senator Moser.

MOSER: These classes of wells are all classes of injection wells that you were describing?

HAL DEMUTH: Yes, sir.

MOSER: And is the hole that you drill for an injection well similar to what you would drill when you're drilling to extract oil? I mean, in size or depth or--

HAL DEMUTH: Similar in ways, different in some very important ways.

MOSER: Do you circulate water to bring the chips back up to the surface? And do you have a borrow pit or whatever that you pump that water into and then back down into the well?

HAL DEMUTH: Correct. Commonly, you know, common mud rotary drilling techniques would be applied just like you would if it was oil and gas.

MOSER: Is the area where you're going to contemplate injecting the CO₂, is it under any pressure, usually?

HAL DEMUTH: Commonly, it's either neutral pressure, which if, if you look at it in water wall terms, it would mean water stands to surface or under pressure, a lot of Nebraska is subnormal pressure. Where the reservoir is actually under pressure compared to normal conditions.

MOSER: And you're not looking necessarily for a cavern to store it in, you're looking for porous rock to store it in?

HAL DEMUTH: That is correct. There-- there's, there's kind of a, a, a misnomer when people think about subsurface flow, where all this is saturated rock. And, and it's, it's not an open void. It's not a cavern. It is saturated rock. Commonly, either porous media, which we would refer to as a sandstone or in, in many cases in central Nebraska, this would apply where it's a limestone or it's a dolomite.

MOSER: And the danger to the environment probably is not so much that the CO₂ is lost in the process of being injected into the ground, it's more of what you might mix between layers of ground as you're injecting it or drilling the well.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

HAL DEMUTH: During the drilling process, there's going to be very little mixing or, or danger, if you will. Of, of greater priority is demonstrating that you have geologic containment, which is suitable, you know, geologic strata above the injection zone to contain the fluid.

MOSER: So you can pressurize this stuff into the space and it'll stay there.

HAL DEMUTH: Correct. And well construction, so that you've constructed the well in a way that you've isolated the well and you don't have flow up the annulus. And there's a, there's a very detailed, stringent construction program. There's annual monitoring to determine that within the UIC program. And it's worth noting that just Class I wells, for an example, which is industrial waste, there's over 800 of these wells in the country right now that are operating. So the, the idea of injecting in the subsurface is not new. The regulatory program is not new.

MOSER: It's not a Buck Rogers process that nobody knows.

HAL DEMUTH: That's correct. And some of those are hazardous waste wells where we have to do 10,000 fate and transport modeling to look at, at, at transport issues, to look it up, dip down dip issues. So the, the Class VI program is even more rigorous in terms of demonstrating containment over a long period of time.

MOSER: How far out-- you would drill just one well, or do you drill a series of wells from one central point?

HAL DEMUTH: It depends on the project. And, and I don't want to bias projects, but certainly you might start with a project that has one injection well and maybe one monitor well within the-- in the injection zone. If larger volumes of CO2 needed to be managed, then you could certainly add more injection wells. There's only one currently permitted operating Class VI project in the country right now, and that's ADM in Decatur, Illinois. That is a two-well project. So certainly it could involve multiple wells over time. It really depends on the volume of CO2.

MOSER: How big of an area would this CO2 spread into under the ground? I mean, could it go hundreds of feet, thousands of feet, miles?

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

HAL DEMUTH: It could be miles. And again, it depends on the volume and it depends on the porosity thickness, which is the porosity over the, the thickness interval that you inject into. But you know, commonly, it might it be a mile. Certainly, is it likely to be ten miles? That would be unusual.

MOSER: Take a lot of pressure to push it that far?

HAL DEMUTH: Pressure and a lot of CO2 and, and a lot of what we refer to as storage in the reservoir. It takes a large underground reservoir where you can store fluid.

MOSER: The CO2 is gaseous when it's collected at the surface and then it's pressurized?

HAL DEMUTH: Correct.

MOSER: And is it cooled or heated or--

HAL DEMUTH: It may need some cooling. Depends on the, on the capture unit and, and the compression design.

MOSER: Because CO2 is kind of tricky to keep liquid, I mean, it wants to be ice or it wants to be gas and keeping it in that little area in the middle is a little tricky.

HAL DEMUTH: It, it is. I'm, I'm not a chemical engineer, so I don't want to get too far out the guardrails on that. But it, it is--

MOSER: You're more into digging the hole and storing it down there than getting the liquid prepped to go down there.

HAL DEMUTH: Correct. So there, there are some unique aspects. The technology in terms of handling CO2 and the different phases and behaviors are, are well understood. That's just not my specific area of expertise.

MOSER: Thank you.

BOSTELMAN: Senator Gragert.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

GRAGERT: Thank you, Chairman Bostelman. And thank you for your testimony. Yeah, of course, that was the one EPA, but I'd like to just visit a little bit about the permit process.

HAL DEMUTH: Um-hum.

GRAGERT: In the permit process you go through-- do you have to have a closing? Like when, when a completion process, when somebody determines, OK, that-- that's all this area can handle for a CO2 injection in the, in the initial permit process?

HAL DEMUTH: Well, the, the initial permit process-- and if I not understanding you correctly, correct me, you have to demonstrate to the regulators that you understand the, the geologic character of the injection zone and you've got to run calculations that says, OK, if we inject this much CO2, you do some numerical modeling and you show how far the plume should go, what the pressurize associated with that plume is. Then in addition, you've got monitoring to prove out your assumptions, because any time you do a, a well subsurface, you don't have all the answers, so you are making some assumptions. You've got to justify those assumptions. But then there's a fairly rigorous monitoring program as well to show that, that those assumptions are valid. And then also, if they're not, do you have to modify the operation? Maybe you run at a lower pressure, maybe you run at a lower rate, maybe you need to add an, an additional well if you don't have that capacity and you see the plume going farther than you expected, faster than you expected.

GRAGERT: OK, so after that's all finished, do you have-- in the permit process, do you have to tell the EPA how you're going to seal that well and how that will be?

HAL DEMUTH: Um-hum.

GRAGERT: OK.

HAL DEMUTH: Correct.

GRAGERT: That's what I was after.

HAL DEMUTH: And there's a, there's a long, very detailed monitoring program required for long-term monitoring associated with Class VI wells.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

GRAGERT: OK. What, what are, what are some of the-- you know, just like everything else, drinking alcohol or whatever, everything a little bit OK in moderation. What are some of the possible hazards of pumping the CO2 into this, into this supposed, you know, porous area that and, and specifically, if you can talk to hazards to the ground, entering the groundwater or, if it did, what happens? What-- is there a possibility of that? And then we'll talk about probability. You can talk about it in the same sentence if you want.

HAL DEMUTH: Well, we'll, we'll talk about possibility and potential impacts first. And, you know, is, is, you know, is there a possibility that some CO2 escapes somewhere? Yes, there is. I mean, there-- you know, there-- there's always a possibility of something. There's a possibility that, you know, you're, you're cement doesn't hold up. There's a possibility that you could have some distant geologic structure that you didn't understand. But the permit process, you've got to, you've got to, you know, prove almost beyond any doubt or certainly beyond a reasonable doubt that those are not going to happen. You've got to have corrective action if there's concern. Say, there's a, a nearby well that you're-- you don't think was plugged properly. You may have to go replug that well. And again, there's, there's monitoring that goes on during the process. And keep in mind, there's, there's hundreds of Class I wells that operate right now which inject fluids which might be much more detrimental to groundwater than CO2. So the impact of CO2, if it gets into a groundwater system, likely would be a change in pH. And could that possibly mobilize some metals that currently are not mobile in the groundwater system? Yes. But what would have to happen is you get out of your injection zone, you, you breach your confinement. There's likely other porous units above that. You get through those. Even though the CO2 bleeds off, you get through the next one, the next one, the next one, the next one. And then you get up to the [INAUDIBLE]. I mean, in a sense. So there's a very detailed risk analysis that goes along as part of the process. And, and we look at those hypothetical scenarios. What's the likelihood of, of a geologic issue? What's the likelihood of a well construction issue? And, and that's part of the risk analysis that has to be done, which is pretty rigorous.

GRAGERT: In the opening, Senator Flood said that, you know, basically what we'd be looking at and, and I think some of our areas in Nebraska or southwest to western Nebraska for this geological formation to, to even be, you know, looked at or as far as this process and the, and

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

the plant being right there. But what would be the distance, a facility, you know, could, could make this happen, you know, to make it worth, you know, doing. Could there eventually be piped CO2 to a, to a well?

HAL DEMUTH: Certainly, that's, that's been contemplated. There may be an economy of scale of regional facilities and, and in various states that's been considered. So we're kind of in the infancy of, of the permitting process. And like I said, there-- there's only one operational facility. So it's not like other processes where you could say there's, there's already a hundred and we kind of have it, have it dialed in, in terms of exactly how, how you do it. So certainly there could be regional facilities. There's been various oil and gas operators that have talked about that. Certainly in Nebraska, you have, you know, multiple ethanol facilities along I-80, you know, and so is there that possibility? Certainly, I think Chuck Woodside could talk to more fluently about, you know, what might happen in, in terms of, of multiple facilities. But the-- this bill really is beneficial for one facility or it's beneficial for a regional facility. So for either case, this bill is very, very important to ensure that you actually can, can have use of the pore space to inject the CO2.

GRAGERT: And so the storage facility we'll call it, which is all the underground area, will not affect at all, really, other than the well being drilled to the-- say it's, say it's five-by-five-mile acre, you know, area is not going to disturb any of the real surface, the farming, the ranching, the whatever going on above it. Correct?

HAL DEMUTH: That is correct. I mean, there likely would be, you know, some-- I'd say it's a, it's a capture facility associated with an ethanol plant. Well, there would be an injection well. There'd be a pump house, you know, so-- but those are small facilities. There likely would be one or two monitor wells. And again, those, those are, you know, no different than somebody, you know, drilling a water well in a section corner. Very little impact on surface use, specifically on farming.

GRAGERT: Last question would be and I asked Senator Flood earlier, but, and I know it's, it's the commission is going to determine. But how do they determine, OK, this, this area is, is got the limit on carbon dioxide?

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

HAL DEMUTH: Well--

GRAGERT: You know, as far as that's all, that's all we can pump down here.

HAL DEMUTH: That would not at this point be a commission issue. It would be an EPA issue. It would be tied in to the EPA Class VI permit. And, and it would be their determination in terms of allowable volumes, pressures, rate.

GRAGERT: I guess I have one more question, I'm sorry. But you, you said earlier and somebody made a comment, this is not-- we're not going out into Buck Rogers territory, but this is-- would be the only-- the second, the second Class VI well in, in the nation. Was that what you said? Is, is there only one other Class VI well?

HAL DEMUTH: There's only one operational facility. It has two wells. There are other wells in the permit stream. And you'll, you'll hear about-- more about that from the next witness. So there are a lot of projects going on. You know, we're working on projects in Texas and Louisiana, in Ohio, in Nebraska. So there's a lot of interest in CO2 storage. But the permitting process is, is somewhat complex. The regulatory approval process in most states takes a long time. So there's a-- there's a lot of momentum in this area and, and there will be a lot of projects. But in terms of current operating facilities, there's only one on, on strictly brine storage. There are oil and gas, EOR with CO2 projects, but that's different than what's contemplated here.

GRAGERT: Thanks a lot.

HAL DEMUTH: You're welcome.

BOSTELMAN: Senator Aguilar.

AGUILAR: Thank you for being here and your expertise today. When carbon dioxide is injected and it's in its injectable form, does it have a natural tendency to want to rise?

HAL DEMUTH: Yes, sir.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

AGUILAR: OK. Now, next question. When say, for instance, a well fails permit and inspections, do you have to take the carbon dioxide back out of where it's storing?

HAL DEMUTH: The, the way the program is, is written now is it's eliminating potential impacts. So it would not be a physical we're going to go remove the carbon dioxide. Some of it could be, but more likely it would be shut down the well immediately. If you shut down the well and you're not injecting under pressure, then the mobility of that carbon dioxide becomes more limited. And so the potential to impact, say, a drinking water source becomes more limited as well.

AGUILAR: Thank you.

HAL DEMUTH: Um-hum.

BOSTELMAN: Senator Cavanaugh.

J. CAVANAUGH: Thank you, Chairman Bostelman. And thank you, Mr. Demuth. Is that right?

HAL DEMUTH: Yes.

J. CAVANAUGH: Thank you for being here. It's been a really informative conversation. You're talking about, there's one site in the U.S., which is the one in Illinois and a bunch potentially in the pipeline. Is anybody else doing it around the world?

HAL DEMUTH: Yes.

J. CAVANAUGH: And how is it going?

HAL DEMUTH: Well, and, and I think the, the next witness can, can speak more fluently about some of the international projects.

J. CAVANAUGH: OK.

HAL DEMUTH: But there, there are international projects that have been going on for years with large volume injection.

J. CAVANAUGH: Of this particular substance?

HAL DEMUTH: Yes.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

J. CAVANAUGH: OK.

HAL DEMUTH: So there, there is a, a-- been a fair amount of applied R&D that's been done related to CO2 injection and certainly within the U.S. within the last 10, 15 years, billions literally of, of research by DOE, Intel, and other agencies in terms of CO2 injection, migration, fate transport, all those things.

J. CAVANAUGH: How long have they been doing it in Illinois?

HAL DEMUTH: I'm sorry?

J. CAVANAUGH: How long has the Illinois project been going on?

HAL DEMUTH: You know, I don't know the exact. I, I think it's probably on the order of five to ten years.

J. CAVANAUGH: And obviously, the, the oversight of it is long. How long are we talking?

HAL DEMUTH: Well, the kind of the default with EPA currently is, is a 50-year monitoring program after you cease injection.

J. CAVANAUGH: And then that's presumably all goes well. But if there's problems, it might change or something. Is that--

HAL DEMUTH: That is correct.

J. CAVANAUGH: OK. Is there, and you're not a chemical engineer, but is there a point at which it becomes inert, it has melded with the, the rocks or, I mean, is, is there a point at which we wouldn't have a concern going forward of its migration after that or is it always going to be in a form that would migrate?

HAL DEMUTH: Long term, eventually you could reach a point where it's fairly benign. But again, that depends on the geology. Some certainly could remain in, in kind of a gaseous form long term. But again, the, the-- we're talking about CO2 here. So the, the potential environmental impact is certainly much less than if you had some other hydrocarbons that were-- have already been in the ground long term for, you know, many, many years.

J. CAVANAUGH: Thank you.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: Senator Moser.

MOSER: Is the injection likely to cause oil or gas migration at all? Could it?

HAL DEMUTH: If it, if it were in a zone that had existing or historic oil and gas concentrations. Yes. But again, what, what we're focused on here is, is the terminology in the, the CCS world, which is, you know, carbon capture storage is brine storage. So this bill--

MOSER: When you say brine storage, you're talking about the CO2 is a brine or you're mixing it with salt or--

HAL DEMUTH: You're, you're mixing it. You're injecting it in a zone which currently has water that has high TDS concentrations. Typically, we, we refer to those as brines as predominantly sodium chloride.

MOSER: Salt.

HAL DEMUTH: And for example, you know, central Nebraska, you know, the Arbuckle going down into Kansas is very saline. And so we refer to that as a, as a brine aquifer.

MOSER: Is it possible to cause earthquakes like they accuse fracking of being responsible for?

HAL DEMUTH: When you inject fluids in the subsurface, you, you do change pore pressure to a degree and there can be an, an impact on subsurface stresses. We've seen that on Class II injection, you know, notably in Oklahoma. But there's a, there's a very, very key part of that. Injection for, for CCS under a Class VI UIC permit would be below the fracture pressure of the formation. So injecting below fracture pressure versus above frack pressure is very, very different geomechanics.

MOSER: Yeah, beyond my comprehension, probably, but--

HAL DEMUTH: Yeah.

MOSER: --I appreciate the answer. Thank you.

BOSTELMAN: Seeing no further questions, thank you for your testimony.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

HAL DEMUTH: Thank you.

BOSTELMAN: Appreciate it. Next proponent. Welcome.

CHARLES GORECKI: Chairman Bostelman and members of the committee, my name is Charles Gorecki, C-h-a-r-l-e-s G-o-r-e-c-k-i. I am the CEO at the University of North Dakota Energy and Environmental Research Center, more commonly known as the EERC. It's a nonteaching branch of the University of North Dakota. And the EERC is focused on providing practical, pioneering solutions to the nature-- nation's energy and environmental challenges through fundamental and applied research. The EERC is pleased to provide the following brief commentary regarding carbon capture, utilization, and storage. The EERC leads the Plains CO2 Reduction Partnership that's been in existence since 2003. It's one of four current regional partnership initiatives funded by the U.S. Department of Energy, the North Dakota Industrial Commission, and many other participating member organizations. The PCOR Partnership is focused on accelerating commercial deployment of CCUS in its region and beyond. The PCOR Partnership region provides ideal opportunities for widespread commercial deployment of CCUS. It comprises part or all of ten U.S. states and four Canadian provinces. PCOR Partnership region encompasses the central and northern Great Plains of North America, including the state of Nebraska. This region is home to abundant natural resources and diverse sources of anthropogenic carbon dioxide, including power generation, gas processing plants, and ethanol facilities. It also has excellent geology for CO2 storage and utilization, a history of CO2 transport and expanding pipeline infrastructure, and established industrial and energy sectors. Since 2003, PCOR has been working with over 120 industry and government partners. The PCOR Partnership has been integrating CCUS into the existing commercial industry within the PCOR region. As part of this effort, the PCOR Partnership members have provided scientific data on CCUS to better inform state and federal policymakers as they develop legislation related to CCUS. The current Nebraska LB650 is important legislation for advancing commercial CCUS in the PCOR Partnership region and the state of Nebraska. The state of North Dakota, Wyoming, and Montana have established legislation related to geologic storage of CO2. North Dakota and Wyoming are the only states within the PCOR region and the United States that have applied for and received primacy-- primary, primary regulatory authority or primacy from the U.S. Environmental Protection Agency for underground injection control or Class VI wells we've already heard about. North Dakota enacted

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

legislation similar to LB650 in 2009 that addressed pore space ownership, provided legal authority to include nonconsenting owners through pore space amalgamation, addressed long-term liability of closed CO2 storage sites, established a trust fund, an, an administration-- an administrative fund, and granted regulatory authority to North Dakota Industrial Commissions Oil and Gas Division. This key legislation, proposed by LB650 provides part of the necessary clarity needed to project developers and investors, and is the legislative framework necessary for the promulgation of regulations that could also support the application for Nebraska to see Class VI primacy. In the absence of, of state primacy, the regulation and permitting authority for CO2 injection of Class VI wells and the geologic storage in Nebraska would be led by EPA Region 7 office in Kansas City, Kansas. Our North Dakota-- our experience in North Dakota and Wyoming has shown that Class VI rules require some level of regulatory interpretation, and there is great advantage to be able to consistently communicate regularly with state regulators. In addition, the amount of time to receive permit approval is a key consideration for project developers and investors, especially considering tax credits and incentive program deadlines. Red Trail Energy, an ethanol producer located in Richardton, North Dakota, submitted the first Class VI permit application to North Dakota's Oil and Gas Division this week. My team was a part of that application and in large part because of the statutes and regulations established in North Dakota. LB650 establishes the authority and clarity for Nebraska's industrial facilities to consider CCUS similar to the level of interest and activity we are seeing today in North Dakota. We believe this legislation is an important step to enable commercial CCUS in Nebraska. In addition to being the CEO of the EERC, I have a bachelor's degree in geological engineering and a master's degree in petroleum engineering. Myself and many of the EERC staff are world experts in CCUS and I have been personally involved in multiple CCUS projects in the United States and across the entire planet. I'd be happy to take any questions.

BOSTELMAN: Thank you for your testimony. Are there questions from committee members? Senator Cavanaugh.

J. CAVANAUGH: Thank you, Chairman Bostelman. And thank you, Mr. Gorecki, for being here and for your expertise on this. Just clarify, it seemed like you said that if we did this, it would put it

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

completely in our hands and take it away from EPA's. Is that a correct interpretation of what you said?

CHARLES GORECKI: Senator Cavanaugh, thank you for the question. No, not exactly. This, this provides the, the other piece, the Class VI well permit is only a part of the piece that would still remain with the EPA. This bill does not change that. This bill provides the framework with respect to how, how you handle and manage the pore space. This bill also establishes who has the authority over that, in this case, the Nebraska Oil and Gas Commission. It establishes most of the other necessary pieces in addition to a Class VI well. It also sets the framework so that if Nebraska were to choose and sometime in the future to seek primacy for Class VI, you've got the rest of the pieces all here in Nebraska.

J. CAVANAUGH: OK, that was my question. So you're talking about-- so this bill is not seeking primacy.

CHARLES GORECKI: It is not, sir.

J. CAVANAUGH: OK, that was where I got a little confused, I think. And you-- so did you work on this legislation? Is this similar to legislation in North Dakota?

CHARLES GORECKI: Senator Cavanaugh, yes, it is.

J. CAVANAUGH: And as to the nonconsenting owners through pore space amalgamation, as you referenced, you have one, one that just applied this week. Did that come up, was that an issue? Any nonconsenting owners?

CHARLES GORECKI: Not as far as I'm aware. So the, the way that it which in that in the state of, in the state of North Dakota, you need to lease that pore space from the surface owner, which would be, I assume, similar in Nebraska. They were easily able to lease that pore space from at least 60 percent. And as far as I'm aware, they actually had no people, no groups that were opposed. But should they have had one, the-- and they would have gone through the reasonable effort to try to negotiate with them. The state then could force them into the agreement and then they would be compensated fairly, leasing that pore space.

J. CAVANAUGH: Any idea what that compensation looks like?

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

CHARLES GORECKI: That is protected through that negotiation. It's very similar to mineral rights leasing. So one person may receive one payment, another person may receive another. In the process of forcing someone in, the state would be then establishing what is-- what was your method by which you compensated people or landowners? And then they would assume some reasonable-- based on that, some reasonable compensation for anybody who was forced into that amalgamation.

J. CAVANAUGH: Got you. And completely different question. You said you've had experience internationally. How many other projects are there around the world? How are those going?

CHARLES GORECKI: Senator Cavanaugh, that's a great question. There are multiple projects around the world. We work closely with Boundary Dam in Saskatchewan. SaskPower is the operator of that site. That's been going on for several years, similar in volumes to what you'd expect from an average size ethanol facility without any issues injecting carbon dioxide almost 10,000 feet into the sub-- actually about 10,000 feet into the subsurface. We've also worked with Shell in Canada. They've been injecting about a million tons per year now for about five years without issue. They have about three injection wells. In that particular instance, again, going on without issue. Since 2005, Equinor has been, before that they were called Statoil, they've been injecting in the North Sea, again since 2005, about a million tons per year without issue, again.

J. CAVANAUGH: Did you say the North Sea?

CHARLES GORECKI: North Sea. Yes.

J. CAVANAUGH: Into the seabed, I assume, not into the water.

CHARLES GORECKI: They drill just like you would offshore oil and gas. So it's a platform of some type or a ship drills into the seafloor, deep below the seafloor, and injecting it into a geologic strata in the-- below the seafloor.

J. CAVANAUGH: And that makes economic sense?

CHARLES GORECKI: It does for them.

J. CAVANAUGH: OK, thank you.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: Senator Moser.

CHARLES GORECKI: Sir.

MOSEER: So are you familiar with the economics of this? Does the-- are the benefits to it primarily kind of, I don't want to say ethereal, that'd be a bad term, but there's no value in the CO2 that's pumped in the ground except that you're getting rid of it.

CHARLES GORECKI: Senator Moser, that's a great question. It's in the-- the premise here is it's in the public's best interest to take carbon dioxide that would otherwise be admitted to the atmosphere and put it in the subsurface. For an operator such as an ethanol facility in the state of Nebraska or the state of North Dakota, there is value for them. There is value for them in a tax credit that currently exists. It's Section 40-- or 45Q which allows \$50 per ton for a tax credit for CO2 stored in a-- permanently stored in the subsurface. And then these low carbon fuel standards programs in states like California also pay for reduced carbon intensity. So again, like an ethanol producer, if they're selling their carbon-- or excuse me, selling their ethanol into that market, they would actually get paid a premium for a reduction in the carbon intensity.

MOSEER: So it's solving a problem for somebody that has a lot of byproduct of carbon dioxide.

CHARLES GORECKI: Yes, sir.

MOSEER: You traveled a long way, I appreciate you coming and providing a little clarity, because it's, you know, it's a technology that I think is all new to us. So anything that-- any of the questions that we asked earlier, do you have better answers? I liked that other guy. I liked the way he, he seemed to be. He didn't seem like an attorney. He kind of answered the questions directly. I love that. But, but not to slam any attorneys in here, [LAUGHTER] which we seem to have a lot of both here and probably out there. But for any of the questions that were asked, were the answers sufficient for what we asked? Do you-- anything catch your ear when you were listening?

CHARLES GORECKI: I think, you know, there was some questions about safety and injection, the design of the well is designed to prevent any migration of carbon dioxide out of the formation. As previous

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

testifier said, there can be things that happen, but we do things on a regular basis, as required by the permitting process to ensure that there is no risk pathway there. And should it happen, we have a plan in which we handle that. We plug the, plug the well or stop the leak or whatever the case may be. And the other piece of it is we're injecting, depends on the project, but we inject amount of carbon dioxide related to the source and we evaluate the subsurface to see what its potential is. And, and in all cases that I've ever worked in, the amount of carbon dioxide that we're looking to store is far below what we would need to store in that particular saline-filled reservoir, for example. And if we were to have a leak, we, we can do modeling and different exercises to understand. If there was one, if like a worst case scenario, how much would it be, and it's very small, and we design our plans and our financial assurance to be able to say that we can fix this problem quickly. And we have a financial assurance that says if it was to this magnitude that we would never expect, we have the funds in place. And that's what some of the funds that are designed in LB650 would help cover. As far as the long-term liability, I think that was also addressed. The EPA Class VI regulation says that after you stop injecting, you need to monitor for some period of time. The EPA Class VI regulation says it can be as long as 50 years post injection. At some point along the way, you've established that the CO2 is stable. It's not moving. It is turning into carbonate rocks. It's, it's mixing with the formation water and becoming locked in place. And some-- at some point somebody will say, yes, we give you a certificate of closure and now you can close this site down. The, the ability to transfer that liability, that long-term liability to the state, in this case, Nebraska or North Dakota to North Dakota, is in the benefit of the people as well, because companies oftentimes-- there's not many companies that I can remember or think of that have been here for more than 100 years. So imagining a project lasting that type of a time frame.

MOSER: So the, the potential leak would be possibly this brackish water would have carbon dioxide in it and it would leak out or the carbon dioxide itself would leak out?

CHARLES GORECKI: It-- that, that would be a potential very unlikely. So we do-- we characterize the formation. We characterize the cap rocks. We look for thick, laterally, continuous seals that prevent any migration. And then what happens is our wells themselves become the potential pathway which we can easily monitor. We regularly check

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

integrity of our cements, our steel, to ensure that our well is in perfect condition. And if we identify a potential problem, we go and fix it before there's ever an issue. But if there were to be one, then we know how to, to fix it. And that, that-- what leaks to the surface would most likely be CO2 itself through that pathway. And that as opposed to CO2 saturated brine, which actually becomes more dense than the "in situ" brine. When CO2 dissolves into brine, it actually becomes more dense. But the gaseous CO2 itself in the subsurface is less dense in the water.

MOSER: And do you case these wells all the way down or just partway?

CHARLES GORECKI: All the way down, sir. We--

MOSER: And then you pull the stem out?

CHARLES GORECKI: A Class VI well is a series of steel and cement, steel and cement, steel and cement. So in North Dakota, I can't speak specifically-- well, a Class VI design actually I can speak to. So we drill the first string of casing through our lowest, most source of drinking water into that, that seal. And we put in a steel casing there and we cement all the way back to surface and then--

MOSER: Around the outside.

CHARLES GORECKI: Around the outside. And then we drill through that with the next string of casing all the way down to our target injection horizon. Then we circulate cement all the way back up to the surface. So now we have multiple layers of cement and steel that are protecting our groundwater. And then inside of that we put a-- an injection tubing. So, so we've got multiple layers and we have to monitor that annulus so the injection tubing and the, and the casing is a-- is an area of void space that we can monitor that pressure. So we know that our injection is going smoothly, that we don't have any of our injected CO2 going into that casing, which still is protected from our formations. So we do a number of things to ensure that we have the best injection well that we possibly can have. And then we're required by permit to regularly check its integrity, ensure that we have the, the most complete integrity in our well.

MOSER: The, the-- are the casings sequential or are they concentric or--

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

CHARLES GORECKI: The, the first casing, the one that goes through the drinking water is the widest. Well, actually there's one up near the surface as well. And there's one that goes all the way through the drinking water. They're getting concentrically smaller and they're cemented inside of each other basically.

MOSER: So it's kind of like a telescope.

CHARLES GORECKI: Yes.

MOSER: It's wider at the top and narrower at the bottom. Wow, really interesting. Thank you.

BOSTELMAN: Senator Groene.

GROENE: Thank you. I wasn't here earlier. I presented-- introduced a bill, so maybe this is redundant, but your expertise is geology and what else?

CHARLES GORECKI: A geological engineering in geology, and then reservoir engineering and petroleum engineering.

GROENE: I got some simple layman questions on chemistry. Since God created the Earth, is there one more molecule of carbon or atom of carbon or oxygen, or is it the same number?

CHARLES GORECKI: The same. Well, there's, there's changes--

GROENE: There's not one more carbon or oxygen molecule or atom ever been existing. No alchemist has been able to do that, have they?

CHARLES GORECKI: Sure, they're-- I think I follow your question.

GROENE: But you're saying there's more carbon dioxide. Everybody's saying there's more carbon dioxide. It's not a poison is it?

CHARLES GORECKI: No, sir.

GROENE: So if it escapes from this well, that's not a big deal. Well, Senator Moser asked you if it escapes, how safe are we? It sounded like.

CHARLES GORECKI: Sure.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

GROENE: It's carbon dioxide. It's a natural gas, isn't it?

CHARLES GORECKI: Sure, we breathe it out in every single breath.

GROENE: Yeah.

CHARLES GORECKI: The concentration of carbon dioxide, the concern is we have an increasing concentration of carbon dioxide in the atmosphere and we're trying to reduce that rise.

GROENE: What's the half-life of carbon dioxide in nature? Do you know?

CHARLES GORECKI: It-- well, the natural carbon cycle from plants take up carbon dioxide and photosynthesis and expel oxygen, and that locks in carbon dioxide for some period of time until that plant breaks down and the carbon dioxide is released back in. It's the natural carbon cycle that we have to--

GROENE: It's not released. The plant releases the oxygen and keeps the carbon away.

CHARLES GORECKI: Right, but when the plant dies, sir, then we have some carbon dioxide that-- and it rots, we have some carbon dioxide.

GROENE: But there's not a new carbon [INAUDIBLE].

CHARLES GORECKI: No, the natural carbon cycle is, is the same amount stays there. Over time, some of that carbon dioxide from the plant matter is locked in the subsurface and geology buries it deeper and deeper.

GROENE: [INAUDIBLE]

CHARLES GORECKI: Over time that we create hydrocarbons and that carbon-- that hydrocarbon is primarily--

GROENE: Maybe I'm-- maybe it's a dumb question. I'm known to ask those. I look up the makeup of petroleum, it's 97 percent carbon and one-tenth a percent to one and a half percent oxygen. All right. So now we're going to bury twice as much oxygen as carbon. Does that makes sense? It's CO₂. So what about the oxygen supply in the world? We're pumping it in the ground. It wasn't there as a petroleum.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

CHARLES GORECKI: Senator, I'm not sure I follow the question.

GROENE: CO2 is one atom of carbon--

CHARLES GORECKI: Yes, sir.

GROENE: --and two atoms of oxygen. We're putting the carbon back in, in the ground that came from the burning of petroleum products, fossil fuels. Petroleum is 97 percent carbon and only one-tenth of a percent oxygen. That doesn't sound like an offset to me, a correct offset of what we're doing. We're burying a lot of oxygen and I happen to like oxygen. I mean, has anybody thought this through?

CHARLES GORECKI: Sir, my expertise is in subsurface injection, characterization of geology, production and injection of fluids. That's where my expertise lies.

GROENE: I understand. And that's what you've said, you're a geologist, so. But my corn fields like CO2 around the power plant in Lincoln County. [INAUDIBLE] like it too, because they haven't made me a mas-- complete mask that I can exhale it yet which somebody probably will because it's a danger to the world. But-- so a practical question now. I've got one of the biggest-- Senator Hughes in our area has one of the biggest fossil fuel coal burning power plants in the nation in Lincoln County. Now, would they just-- would they-- do they compress this and put it in a semi and then go pump it in the ground or do they usually look for a site close to the facility to inject it in the ground?

CHARLES GORECKI: Well, it's, it's ideal to find a, a site close that reduces your transport costs. We've worked with-- in North Dakota, we're working with a couple of coal fire power utilities now that are looking at doing CO2 capture compression consumption.

GROENE: So you will come out and try to find a, a place close where than can just pipe it there and pump it into the ground.

CHARLES GORECKI: Ideally, yes, to reduce transport costs. But you need to select the best site possible. And it's location, location, location is the most important three things in geologic storage and carbon dioxide.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

GROENE: And you look for porous, porous ground or, or you said brine. So water absorbs it, in some form absorbs CO2 pretty, pretty rapidly.

CHARLES GORECKI: Yes, sir. So the ideal scenario, we look for a number of things. First, we look for permeable horizons that are at a depth greater than about 2,600 feet, 3,000 feet. At that depth, you have pressure and temperature where CO2 is in a dense phase. We also look for a lateral-- laterally, continuous, impermeable zone that will prevent any vertical migration. And then we look at things like legacy wells, which was already addressed. Those will leave potential pathways for migration. So what we do is look for ideal geology that is permeable rock that has the ability to transmit that pressure and fluid, which is currently filled with, in this case, salty water or brine. And then when we inject, we, we displace some of that brine and it occupies a space in the subsurface below that impermeable cap rock and mixes with the water over time. And then over time, it turns into a carbonate and is locked into the subsurface. As far as your, your question related to, to corn. And one of the things that our partner Red Trail sees is, is a great advantage to the state of North Dakota, which many of your Nebraska constituents may think as well, is that in Red Trail's situation, they're able to increase the value of the corn that's produced in the region because then it's used to create that ethanol, used to feed cattle, that ethanol has a higher value by being sold into those low-carbon fuel markets and also able to capture that 45Q tax credit. So Red Trail and, and many of the Nebraska ethanol producers, I think, would say the same thing is it creates a strategic advantage not just for the ethanol industry, but also for the ag and the corn growers.

GROENE: So it's an economic business decision more than anything else because you can get a tax credit.

CHARLES GORECKI: And, and a premium price on your ethanol.

GROENE: Why a premium price on your ethanol?

CHARLES GORECKI: If it's sold into a low-carbon fuel market, your overall carbon intensity, which a low-carbon fuel market would look at.

GROENE: I forgot about California. Yeah. Thank you.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: Senator Gragert.

GRAGERT: No, I'm good.

BOSTELMAN: OK.

GRAGERT: Thanks.

BOSTELMAN: Think that's all we have for you today. Thank you very much for coming. Next proponent. Welcome.

CHUCK WOODSIDE: Oh, good morning, Chairman Bostelman and members of the Natural Resources Committee. I'm Chuck Woodside, C-h-u-c-k W-o-o-d-s-i-d-e, the CEO of KAAPA Ethanol Holdings. Since its inception in 2001, KAAPA Ethanol has grown from its initial plant in Minden, Nebraska to a second plant in Ravenna and interest in ethanol production in Minnesota, Ohio, and North Dakota. I'm here today in support of LB650, the Nebraska Geologic Storage of Carbon Dioxide Act. By this point, you're aware that the ethanol industry in Nebraska is taking the lead in developing geologic carbon dioxide storage in Nebraska. A low-carbon renewable fuel, ethanol is a significant part of the low-carbon energy future. As an innovator in Nebraska's ethanol industry for the past 20 years, KAAPA's always looking for ways to reduce the carbon dioxide impact of our product. As we look forward to the future, we've identified the capture of the carbon dioxide released during ethanol production as an opportunity to reduce the carbon footprint of our fuel and expand our access to markets that provide greater return for low-carbon fuel. Geologic storage requires specific geology to be done effectively and safely. Not every area of Nebraska is suitable as a storage site. The first step for any potential capture and storage project is to study and precisely characterize the deep geology at the site. This can be a costly and time consuming process. Additionally, the EPA regulates storage facilities as Class VI wells through its UIC program, a regulatory process that by necessity is detailed and involved. While a project at operational scale can cost tens of millions of dollars to complete, the initial development and permitting phase of a project can also be very costly. LB650 is an important step in the investigation of potential project sites as it provides clarity of the state regulatory process and rights at the storage site. While the EPA has primacy as the regulatory authority, without the certainty of state legal framework, it is difficult to justify the sizable investment needed to

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

begin project development. Just like it could be difficult to conceptualize supercritical CO2 stored 3 to 10,000 below surface, understanding the direct impact of a carbon storage project can seem a bit vague. With a few data points, I hope I can provide some clarity. KAAPA's two production facilities makes up 9 percent of the total of ethanol production in Nebraska, which utilizes almost 4 percent of the corn grown in Nebraska. Each year, we turn 70 million bushels of corn into 220 million gallons of ethanol. In addition to providing a market for Nebraska corn and producing value-added feed products for the Nebraska cattle industry, the beneficiaries of our success are 1,400 unit holders, most of whom are farmers in central Nebraska. We pride ourselves in the role we play in the economic growth and sustainability of central Nebraska. An increase in the value of ethanol produced from our plants has a direct benefit to the corn growers, the cattle feeders, our communities, and unit holders in central Nebraska. The market for the ethanol we produce for Nebraska corn values are low-carbon product. Currently, 73 percent of ethanol from KAAPA plants goes to markets in California and Oregon, who both score our fuel based on carbon impact. Over 11 percent of the ethanol demand of the state of California is met by KAAPA's low-carbon ethanol. Should carbon storage be a viable option, the value of our ethanol in these and other expanding carbon scoring fuel markets increases. Increased demand for KAAPA ethanol has a direct impact on the corn market and economic growth within the footprint. Without the state regulatory framework established by LB650, the reduction in carbon impact would not be recognized by the California or Oregon regulators. We would be unable to take advantage of the market opportunities and bring that value back to Nebraska. It's a comprehensive, proven approach to state framework for carbon dioxide projects, carbon storage projects. The legislation builds upon the experience of Wyoming, North Dakota, and Louisiana and supplements and enhances the federal EPA process. It gives companies like KAAPA a clear, defined process as they continue to explore the viability of commercial scale carbon storage projects. Your support of this critical policy is essential to allow KAAPA and other Nebraska companies to seize the opportunity to increase the market share and value of Nebraska products with a low-carbon footprint. Thank you for your time.

MOSER: Questions from committee members? Senator Gragert.

GRAGERT: Thank you, Vice Chair Moser. And thanks for your testimony.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

CHUCK WOODSIDE: Thank you.

GRAGERT: I just have one quick question. Ethanol plants have been mentioned a number of times here today. What do they currently do with their CO2? How is it currently handled?

CHUCK WOODSIDE: That's a great question. So it varies on where the plant is located and some plants in Nebraska will capture a portion of their CO2 and it will go to make dry ice. It may go to refrigeration. And, and so there are industrial markets, but it's very specific as to how close you are to that market as CO2 is a very dense product and difficult to move. So in some cases, they will capture it and, and compress it. In other cases, today at our plants, we scrub that CO2 and it's released back into the atmosphere.

GRAGERT: Thank you.

MOSER: Senator Groene.

GROENE: What is the source of the CO2, is it the fuel that you use to heat the brew when you-- or is it the byproduct of the corn itself?

CHUCK WOODSIDE: Yeah, so it's, it's a byproduct of the fermentation process. It's generated through the 70 hours that we, that we ferment the mash and it's CO2 that was really captured by the plant in the previous year. Right? And so I think that's, that's the unique opportunity is that the ethanol industry have, is that our, our, our, our CO2 stream is very pure and, and able to be captured.

GROENE: What percentage of the plant itself of the carbon mix in the plant and the oxygen, whatever goes into the ethanol, and what is the waste as far as the gas would you consider?

CHUCK WOODSIDE: So for every-- I hope this answers your question. I-- for every pound of ethanol that we make, we release a pound of CO2. And so in a plant--

GROENE: How much carbon is in that ethanol if a plant had two pounds, a pound of carbon?

CHUCK WOODSIDE: Yeah, so there's six--

GROENE: I may not--

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

CHUCK WOODSIDE: --and, you know, we're going to get quickly beyond. I was an, I was an ag economics major at Lincoln, not a, not a-- so, so I didn't have the chemistry issue. But you know, there are six units of carbon in, in, in, in, in ethanol. Right? And, and again, so that-- it is that that was captured by the plant last year, so.

GROENE: All right, so--

CHUCK WOODSIDE: Is that your question, Mike?

GROENE: --if a pound of corn is 56 pounds or whatever--

CHUCK WOODSIDE: Yeah.

GROENE: --and 30 pounds of that was carbon, all right, if you broke it all down.

CHUCK WOODSIDE: Yeah.

GROENE: Of that bushel of corn, how much ends up in the ethanol and how much ends up in waste in carbon?

CHUCK WOODSIDE: So about a third of the corn bushel goes to make ethanol. A third of the corn bushel goes to make cattle feed, and a third of the bushel is released as CO2.

GROENE: All right. Thank you.

MOSER: And then the warming of the process also burns fuel that may create CO2.

CHUCK WOODSIDE: Yes, but we don't-- we're not-- we don't capture that CO2. We use natural gas to fire our, our ethanol plant. And, and, and there would be, would be some carbon emissions by that as well. But, you know, I think by far away the volume of it is inside the, you know, it's the biogenic carbon that's generated through the fermentation.

MOSER: OK, I'm going to yield the meeting back to our Chairman, who is back in charge, so.

GROENE: I'm opening on another bill and I'll try to be short here.

CHUCK WOODSIDE: Oh, sure.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

GROENE: I don't understand this. It was carbon dioxide that made the bushel of corn that came out of the air. All right. And it's carbon dioxide we're releasing. It seems like a net-- we already have a net gain that you took two-thirds of it and put it into promise and another third into ethanol. You took a, a pound of carbon-- CO2 out of the air, a farmer did when he made the corn. All right. A third of it goes into ethanol, a third goes into the feed source, and a third is released. It sounds like you guys ought to be getting paid because you, you-- at the end of the day, there's less CO2 in the air.

CHUCK WOODSIDE: Well, I, I, I-- certainly low-carbon fuel markets today value the ethanol made in Nebraska because it's made of low-carbon plants. Right? The energy that we use is far less than that of, of other, of, of other plants. So it is valued. And, and I think in particularly in comparison to, you know, the competing fuels which are releasing-- which is releasing carbon dioxide that was captured millions of years ago.

GROENE: But you're up against sugarcane in Brazil, right?

CHUCK WOODSIDE: Well, I think that's a, you know, that's a great point. One of the things that while it does-- so, California imports today a tremendous amount of ethanol from Brazil. And the reason they do that is because they perceive that the ethanol production in, in Brazil is more carbon efficient than it is in-- made in Nebraska. It's the exact same molecule. So but by doing this, it will lower our carbon score to where we'll be able to compete with Brazilian ethanol in California on a carbon score basis.

GROENE: Thank you.

CHUCK WOODSIDE: Thank you.

BOSTELMAN: Senator Cavanaugh.

J. CAVANAUGH: Thank you, Chairman Bostelman. And thank you for being here.

CHUCK WOODSIDE: Yep, thank you.

J. CAVANAUGH: Just a quick question. When you mean compete, does that mean you'll increase your sales or increase your price per gallon?

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

CHUCK WOODSIDE: So, so much of it will depend on, on the carbon market at the time. But as an example, our carbon score in the Minden plant has a score of about 60. Brazilian ethanol has a score of about 30. And the reason that our ethanol in Nebraska is a score of 60 is that it is about a third because of how the corn is produced, a third about how the ethanol produced. And then the California Air Resources Board puts an arbitrary life-cycle analysis on there and indirect land use charge that is arbitrary and not assigned to, to the Brazilian ethanol. And it's that difference that we can make up by injecting the CO2. I don't-- I hope that answers your question.

J. CAVANAUGH: But by getting a lower score, you'll be able to sell more of it to California.

CHUCK WOODSIDE: So it, it will, it will open the market and it will put-- yeah, I mean, I, I think it, it should increase the value of the ethanol because of the additional demand.

J. CAVANAUGH: Thank you.

BOSTELMAN: Seeing no other questions, thank you for your testimony today.

CHUCK WOODSIDE: Thank you very much.

BOSTELMAN: Anyone else like to testify as proponent for LB650? Welcome.

KRISTEN HASSEBROOK: Good morning, Chairman Bostelman and members of the Natural Resources Committee. My name is Kristen Hassebrook, K-r-i-s-t-e-n H-a-s-s-e-b-r-o-o-k, and I'm here today on behalf of the Nebraska Chamber in support of LB650. As the state's largest business association, we support policy like LB650 that encourages a growth-oriented business climate. Businesses large and small across the state are addressing their carbon footprint and adopting sustainable practices to, to meet both environmental goals and respond to consumer expectations. As Nebraska businesses look toward the future, establishing a framework for businesses to take advantage of the opportunities in the carbon economy is an important advantage for our state. LB650 helps us down that path, allowing Nebraska businesses to pursue the business opportunities that exist in the carbon-- capture and storage of carbon dioxide. With every business opportunity

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

comes direct and indirect impacts, as well as increased market value. However, we do have some Nebraska-specific economic numbers published in an October 2020 analysis by the firm Rhodium Group. That analysis found that if Nebraska pursued all of our near to immediate term carbon capture opportunities, there's an opportunity for a \$3.3 to a \$5 billion in capital investment, up to 1,600 jobs over-- per year over the next 15 years associated with that investment, and an ongoing 1,000 jobs to operate the facilities. Equally important for Nebraska businesses is the potential to take advantage of federal tax credits, expand into markets, and score products based on that carbon footprint and realize an increase in their market value and share a base on low-carbon practices. These are impactful numbers, especially for rural Nebraska, where many of these projects could be pursued. In order-- but in order to begin to realize the potential for this economic opportunity, Nebraska must first establish a legal framework for the geologic storage of carbon dioxide. Working within the current EPA guidelines, LB650 creates the clear guidelines for property rights and the regulatory framework to allow private industry to grow Nebraska's low-carbon economy through capital investment and technological innovation. Through investment of capital and specific projects, expansion and creation of value-item markets for Nebraska products and the potential for carbon as a commodity, the bill kickstarts Nebraska's presence in this area. Moreover, investment in carbon capture and storage projects can lead to good jobs. The development and construction of projects and facility operations are only one part of the employment picture. Expanding market opportunities for some of Nebraska's largest business sectors promotes job and wage growth well into the future as well. Finally, carbon capture and storage provides opportunity for a diverse array of industries. LB650 is being spearheaded by the ethanol industry in Nebraska, in part because it provides a, a more immediate and dramatic impact. However, a variety of Nebraska businesses, from power generation to steel processing to manufacturing could utilize the processes developed in LB650. Creating a state policy that allows our members to utilize innovative technology as a solution to CO2 emissions while simultaneously creating economic growth opportunities is a win-win for everyone. We would encourage your support of LB650.

BOSTELMAN: Thank you for your testimony. Any questions from committee members? Senator Cavanaugh.

J. CAVANAUGH: Just one. Was it \$3.3 to \$5 million or billion?

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

KRISTEN HASSEBROOK: Billion.

J. CAVANAUGH: With a B.

KRISTEN HASSEBROOK: And I'll follow up with the report, but I know we're supposed to minimize handouts, so I'll send it electronically after the hearing.

J. CAVANAUGH: Thank you.

BOSTELMAN: Seeing no other questions, thank you for your testimony. Next proponent for LB650, please.

JAN TENBENSEL: Well, good morning.

BOSTELMAN: Good morning.

JAN TENBENSEL: My name is Jan Tenbenschel, J-a-n T-e-n-b-e-n-s-e-l. I am the chairman of the Nebraska Ethanol Board. Today, I'm speaking in favor of LB650. LB650 establishes a framework for carped-- for a carbon economy in Nebraska. States need to complete the regulatory framework to allow carbon capture and store carbon dioxide. Nebraska must remain competitive if we are going to maintain our \$5 billion ethanol industry. And that's in addition to her \$5 billion number, that's construction, etcetera. If we lose part of our industry due to competition from other states, it would be devastating to the ag economy in Nebraska. How could we lose part of an industry? Well, let's say if Kansas gets carbon capture, for instance, or South Dakota and, and a KAAPA Plant has the opportunity to put in an expansion, well, they might choose to expand a plant in Kansas or other than Nebraska. You know, this could be devastating. We have-- we need to get rid of all the corn we can. It's what we do best here. And if, if an ethanol biorefinery captures recycled CO2 from the fermentation process, it will lower the carbon and [INAUDIBLE] the plant. Now, not to get too far in the weeds, but it can lower the plant score by about 30 grams of carbon per megajoule of energy. And nobody knows what that means. But I'll tell you what that means. It's about a billion dollars a year for Nebraska. That's taxable income for the plants. That's a range, a half, a half a billion to a billion and a half dollars due to the carbon credits from California, etcetera. So this is, this is a big deal. And we are only a few years away from ultra low or even negative carbon ethanol. Lowering the CI score increases the value of

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

our ethanol in low-carbon markets such as in California. And many states already have plans of taking part in clean fuels policies such as California's LCFS, we're looking at a Midwest, clean fuel policy, the Pacific Northwest, the Northeast United States. Everybody is looking at a clean fuel policy. We might not be far from a national clean fuel policy. In times like COVID when there's nowhere for the ethanol to go and there's nowhere for our products to go, we need to have the most in demand product possible. And having a low-carbon, low-carbon product would allow us to have that product. California's low-carbon fuel standard recognizes carbon capture and storage is a viable pathway to reduce emissions from transportation fuels. So that takes care of that. And how does this all work? Thanks to the, what I call the solar collectors that we have, which are the corn plants in the field, we recycle carbon from the atmosphere. And I'm going to try to answer some of your questions as I go here. And Senator Groene, you had mentioned what, what, what carbon is in the corn. Well, each kernel of corn, a third of the carbon is going to go into ethanol, a third of the carbon is going to go to animal feed, and a third of carbon is going to be rereleased. Now, that's not mine carbon like petroleum-based fuels. That's actually carbon pulled from the air. And that's, that's the big difference in this. This is, you know, we, we hear this referred to as a waste product. It's, it's a natural product that's pulled from the air. And that's why it's so easy. It's such a clean and pure product. That's why it's easier to compress and to pump underground. So the, the clean carbon that is, that is so important here because of the pressurization, you don't have to do some scrubbing on it compared to, let's say, a, a coal plant or something like that. You'd have to actually clean the carbon before you clean and too much byproducts, etcetera. And, and it's, it's not really a waste product. This is a natural product like you say. It's just-- we just need to take care of-- get as much captured and stored as possible to offset other carbon sources. Full implementation of CO2 capture and storage could result in significant value to the state through tax revenues. Once again, back to that billion dollar number. And as we go down the road to ultralow, neutral, or even negative carbon fuel, we have to have every tool in our toolbox, every piece of the puzzle to make this happen. And without that, we are left in an uncompetitive position for the ethanol industry in the state of Nebraska. There are more tools than just this. But this is a very important tool to get us going. Nebraska must be a leader. Nebraska was a leader in 1970s in the two-million-mile road test. Nebraska is a

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

leader today in the demonstrations proving that you can use 30 percent ethanol in legacy vehicles, which will in turn eliminate aromatics and fuel, which would be a wonderful thing because the aromatic score is extremely high carbon compared to the saturates in gasoline. The, the-- I will hit a couple of your, your questions now. We mentioned indirect land use from Brazil. They-- Brazil does not have a carbon credit. What happens is they feel that if I grow an acre of corn in Cambridge, Nebraska, someone in Brazil has to grow an acre of corn to replace that acre of corn that we used for ethanol. But Brazil doesn't have the-- if they grow an acre of sugarcane for ethanol, they don't figure that I have to grow an acre of sugarcane in Nebraska to replace that acre of sugarcane, so it's, it's really an administrative situation there. We spoke about the-- Senator Cavanaugh, you asked about the value of CO2 and here's a Buck Rogers idea for you. The CO2 that doesn't become embedded in the limestone, couple hundred years from now, let's say we have massive solar power, we have massive wind power, we have excess energy during wind and during certain times of the day, etcetera, CO2, pure CO2 can be remade into ethanol. It's an extremely energy intensive process. But if you had excess energy, it would be easy to do. Right now you can get online and order a bottle of vodka that's been made from the air and that's called air vodka. It's made from CO2 with a, a copper electoral process, which is extremely expensive and it's impractical to do in the short term.

BOSTELMAN: OK.

JAN TENBENSEL: Thank you.

BOSTELMAN: Thank you. All right. Thank you for your testimony. Any questions? Seeing none, thank you for your testimony.

JAN TENBENSEL: Thank you.

BOSTELMAN: Next proponent for LB650. Seeing none, opponents for LB650, please step forward. Seeing none, anyone like to testify in the neutral capacity on LB650?

JOHN RUNDEL: Good morning, Chairman Bostelman, members of the committee. Senators, it's good to be here this morning. My name is John Rundel, J-o-h-n R-u-n-d-e-l. I live in Trenton, Nebraska. I'm currently serving as the chairman of the Nebraska Oil and Gas Conservation Commission. And Senator [INAUDIBLE] ask who the

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

commission is, that is the Nebraska Oil and Gas Conservation Commission, which is referenced in LB650. I believe the Nebraska Oil and Gas Conservation Commission is the best equipped of any state agency in Nebraska to provide oversight if LB650 is enabled. It's not a real quick process, we're, we're a cash-funded agency, meaning that we derive all of our income to operate our agency off a mill levy, assessed to oil and gas production, which is paid by the operators and the owners to come off the total value of the oil and gas is what our mill levy is assessed on. LB650 has the funding mechanisms in place to make this program a self-funded program. It's not a real quick process and so there will probably need to be some appropriations made in the bridge until enough funds are generated to be self-sustaining. If LB650 is enabled-- enacted, the Nebraska Oil and Gas Conservation Commission would start a rulemaking process, meaning we would conduct public hearings, conduct fact finding, involve stakeholders, the ethanol producers, the power plants, landowners, people concerned about water and take that all in into a public hearing, develop our rules and regulations related to this capture of carbon dioxide. Right now, primacy would stay with the EPA out of Region 7 in Kansas City. At sometime during the future if we were directed to, we could apply for primacy, but there's quite a few steps that need to be put in place. But LB650 provides a lot of that framework where the regulatory issue. Right now, currently, the Nebraska Oil and Gas Conservation Commission, we, we have primacy over the Class II wells, which are oil and gas operational wells to reinject brine produced with oil and gas either for pressure maintenance or disposal. We're operating 110 active in class wells in the state of Nebraska right now. And we're real proud of the fact that nobody knows that. They operate trouble free day in, day out and have for decades. We have the expertise. We have the technical know-how. We have the personnel on staff to monitor these wells safely to provide economic value and protect our valuable water resources.

JOHN RUNDEL: I think that's most of what I wanted to share with you today. I think it's an interesting concept and I think that Nebraska Oil and Gas Commission is capable of fulfilling what's needed under LB650.

BOSTELMAN: Thank you for your testimony.

JOHN RUNDEL: Thank you.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: Senator Hughes.

HUGHES: Very good. Thank you, Chairman Bostelman. Thank you, Mr. Rundel, for coming in. It's always good to see you. So would you give us just a little bit of background about yourself and then tell us about the expertise that the Oil and Gas Commission-- Conservation Commission has that you would be able to have oversight over a Class VI well.

JOHN RUNDEL: OK. I'm a petroleum geologist, I've practiced geology in Nebraska for a little over 40 years now. And so I guess in Trenton, I'm still a newcomer. But I've worked all over the western United States, and I have quite a bit of experience at. I've been chairman of the Nebraska Oil and Gas Conservation Commission the last three years, have been a member for the last five years. The commission is located in Sydney. We have probably one of the smallest state agencies. We have a director, a deputy director, some office personnel, and then we have field inspectors. Our field inspectors are very experienced, have a lot of wells to monitor. We, we inspect every oil and gas well in the state of Nebraska on a regular basis. The injection wells are monitored more frequently. We conduct mechanical integrity tests on any injection well. As was talked about earlier, there is multiple streams of casing. We monitor the annulus pressures on all of those to ensure that we don't have any fluid escaping out of our injection tubing into these annular spaces between our casing strings. That's the first indication that there's anything wrong. And at that point, if a well fails its mechanical integrity test, injection is stopped immediately and remediation must take place before we allow injection to continue.

HUGHES: OK, thank you.

BOSTELMAN: Seeing no other questions, thank you for your testimony today.

JOHN RUNDEL: Thank you.

BOSTELMAN: Next neutral testifier.

MATT JOECKEL: Excuse me?

BOSTELMAN: Neutral.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

MATT JOECKEL: Good morning, everyone, thank you for having me here today. My name is R.M., that is R period, M period, Matt, and you may call me Matt, and that is open parenthesis M-a-t-t close parenthesis, Joeckel, J-o-e-c-k-e-l, and I hold the position of state geologist and director of the Conservation and Survey Division, Nebraska's Geological Survey at the University of Nebraska-Lincoln. Although I have indicated my job title and affiliation, I wish to make it perfectly clear that I am testifying as an individual citizen and that my comments should not be taken as a position of the University of Nebraska. I have a Ph.D. in geology from the University of Iowa. I have worked on geological research in the state of Nebraska for more than 35 years. I spent three years working with the Battelle Memorial Institute and other entities in the Nebraska CarbonSAFE project. That project researched the possibilities for carbon capture and underground storage or sequestration, hereafter CCS, in Nebraska. And now I will begin my written testimony, thank you. CCS is a newer technology that shows great promise. Many experts agree that it should be included in the portfolio of multiple strategies for decreasing anthropogenic carbon dioxide emissions into Earth's atmosphere. A small number, approximately 20, of operating CCS facilities currently exists worldwide. Conditions vary between those sites, but key principles are constant in application. These projects have been sufficiently encouraging to stimulate additional study, planning and development. Although it is but one aspect of humankind's future relationship with carbon, the world continues to move forward with CCS. The fundamental geological science and engineering principles that support CCS are sound. A specific set of geologic characteristics is required at any site in order to make it viable. Trained geologists must provide thorough assessments, likewise, so must engineers. The recently concluded Nebraska CarbonSAFE study involved observations ranging in spatial scales from the submicroscopic to the size of an entire county. They also considered the geologist's favorite dimension of all: time. When modeling the basic behavior of a storage site in the long-run, CarbonSAFE concluded that CCS was theoretically feasible in several parts, although definitely not all of Nebraska. I'm going to conclude my statement today with the geologists observation reflecting the development of the mining and energy industries. The following elements contribute to the success of a technology over time: financial incentives, private capital, potential for innovation, evolving business models, scientific research, acknowledgment of social environmental issues including hazards and risks, but also

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

well-informed and wise government policy, timely and effective legislation that anticipates problems, and finally, the directive-- the directives and means for appropriate long-term monitoring. I will be very happy to entertain your questions. But I'll further observe that many, if not all of these elements are present in Nebraska today. Mr. Chairman, if I may step out of line slightly here and plead with you and ask if I might address some questions that were asked earlier by some of the senators?

BOSTELMAN: Sure.

MATT JOECKEL: I will proceed with that first and then entertain other questions as time permits. Senator Groene, I've engaged with you in committees before. You may not remember, but I'm always impressed by--

GROENE: I probably didn't understand you then either.

MATT JOECKEL: Hear me out. I'm always impressed by your incisiveness, your intellect, in your wit.

GROENE: Thank you. [INAUDIBLE].

MATT JOECKEL: I want to reply to you very respectfully. You asked an astute question about burying oxygen, as it were. When we consider the present composition of the Earth's atmosphere is only about 0.04 percent carbon dioxide, that's a drop in the bucket. So really, we aren't losing much carbon dioxide effectively. We're lucky. Planets like Mars and Venus, our sister planets, have atmospheres that are about 95 percent carbon dioxide, but we're not trucking any carbon dioxide there any time soon. So the percentage of carbon dioxide is small. Ergo, the percentage of oxygen that we would be losing is small. I also want to make a comment that addresses a question both you and your astute colleague, Senator Cavanaugh had, and I believe it had something to do with the global carbon cycle that's come up. Globe, global carbon cycle is extremely complex. It can't be characterized by a single number of years. There's the biological aspect that involves the plants on land and the photosynthesizing organisms in the oceans. And we're talking about residence times of carbon in the form of carbon dioxide of a matter of years before they're broken down and return to the atmosphere. People forget, I think, that there is a geologic part of the carbon cycle. Think of the carbon cycle as an immense old fashioned clock with many gears of

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

various sizes and cogs and other parts, each of which rotates or operates at a different rate. The geological aspect of the carbon cycle that involves coal, petroleum, limestones and dolostones-- you heard the term dolomite earlier-- I would prefer the term dolostone, it's just a fancy version of limestone that has more magnesium in it. All of those rocks have carbon and carbon dioxide in them. Residence times in those rocks could be hundreds of millions of years. The oldest limestones, dolomite-- dolostones on earth are more than 500 million years old and they're still solid. Some of that does get released over time. I hope I did justice to your questions. Senator Moser, who is not present at the moment, asked an extremely astute question about earthquakes. Whenever fluids are introduced into the subsurface, into the crust of the planet, there is a risk of overpressurizing materials that have pore space. However, all of that can be addressed by a thorough site assessment, by having the geologic data, by running the engineering simulations, et cetera. It is as with anything else in our civilization, and you'll pardon me for using this analogy: garbage in, garbage out. It's a saying we have at the university about research. If your data and methods are poor, then your results ultimately are poor as well. So we have to do our homework. There is one paper that I can think of written, I believe, eight, nine, ten years ago that purported that carbon dioxide injection might be a wholesale risk in terms of induced seismicity. Some of the conclusions of that study were faulty in that it sort of took a one-size-fits-all-approach, whereas we need to be cognizant of what happens at a site-by-site scale in the sorts of spatial frames that have been discussed. We talked about thousands of feet or miles earlier. That does not mean that we should not be doing archeologic homework. By the way, there was another question, Senator Groene, that had something to do with no more or less gas coming to Earth's atmosphere. We tend to think of the Earth as a closed system in terms of matter. Everything that was there to begin with is there now. But in truth, there's a small amount of matter-- amount of matter that comes into the Earth every year. Meteorites, or say if we had a comet strike the Earth, we would have additional solids and gases introduced to the planet. And it's a minor point, but it's true. Also, some material does leave the Earth's atmosphere typically, excuse me, most notably atoms of hydrogen. And there's a constant flow of hydrogen out of the atmosphere, and that may be part of why we have an oxidizing atmosphere. So great, incisive questions. There was one more question that, that piqued my interest, and that was from your colleague,

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

Senator Cavanaugh here, a question about the longevity of carbon dioxide in the solid earth. Well, certainly some of the natural carbon dioxide that's in the earth was in place there when the planet accreted in the growing solar system and is still there billions of years later. That doesn't help us much. But let's consider carbon dioxide that was likely produced by microbial interactions after the burial of organic matter in the geologic past. In other words, stuff that was formed later on. We have some evidence, albeit anecdotal, that there is carbon dioxide created during the Cretaceous period, probably somewhere around 70 to 80 million years ago, that's still underground. Now, that doesn't address in any way the risks associated with CCS, but it does provide you some insight that in certain cases, natural carbon dioxide can stay within the Earth's crust for exceedingly long periods of time. I hope I haven't overstepped my bounds here. I just wanted to make sure that you have those answer, questions answered. If there are any others, please let me know.

BOSTELMAN: Thank you, that's helpful. Very informative. Senator Hughes.

HUGHES: Very good, thank you, Dr. Joeckel. Nice to--

MATT JOECKEL: Please call me Matt, sir.

HUGHES: Matt, nice to finally meet you. I know we've talked on the phone a few times.

MATT JOECKEL: Yes, sir.

HUGHES: So where in Nebraska would do you believe the substrata is-- would be conducive for carbon dioxide storage?

MATT JOECKEL: Well, in rough terms about the western two-thirds of the state. In order to achieve that supercritical fluid behavior in carbon dioxide, there is a minimum depth requirement that's usually given at about 800 meters, 2,600 feet, something like that. That's just a rule of thumb. In eastern Nebraska, for example, you'll be out of the sedimentary rock cover if you go down that deep, and we don't really want to entertain injecting carbon dioxide into what we call basement rocks, which are the very old, very hard, not very porous, porous or permeable rocks that underlie the limestones, the dolostones, the

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

sandstones, the shales, et cetera. You can tell that I love geology a little too much. Did I answer your question?

HUGHES: Yes, you did. Thank you very much.

BOSTELMAN: Senator Groene.

GROENE: So in Lincoln County where we had the power plant, that, it's conducive to that area to inject it right by the power plant. Because of western Nebraska, the, the soil formation.

MATT JOECKEL: It's a possibility, geologically speaking. I, I am only vaguely aware of what has been done on site there, but I think it's definitely a possibility. Yes.

GROENE: So if you inject it in the water, into the aquifer, what does it do there?

MATT JOECKEL: Well, we wouldn't be injecting it into an aquifer. And I please want you to understand--

GROENE: You'd go below the aquifer.

MATT JOECKEL: Correct. I don't want to appear didactic here. I think this is very important. Remember, the definition of aquifer is a material that holds economically significant quantities of water. If the water has too high of a concentration of TDS, it's too saline, the economic part of that is off the table. Ergo, I would prefer not to call it an aquifer. So we would be injecting-- we, sorry, some entity would presumably be injecting well below the High Plains aquifer system, which would be separated then from the underlying saline unit by hundreds of feet of comparatively impermeable sedimentary rocks.

GROENE: So you-- let's say you just put CO2 in the water, what harm is done? And it's a good, clean water in the Ogallala aquifer, what harm is done?

MATT JOECKEL: Well, it's going to boil out eventually anyway, number one. Number two, it is going to change the pH in the water under certain circumstances. That soda that the esteemed Senator Moser is drinking is actually an acid solution, carbonic acid. I'm sorry, I ruined your day. I wouldn't worry about that part. It's the other things in there about which I would worry. Now, consider that that

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

weak acidic solution is responsible for shaping a lot of Earth's crusts, crust. That's why we have caves, because we have weak carbonic acid solutions in groundwater. So in that instance that weak carbonic acid solution is dissolving limestone. So we don't really want to accelerate that necessarily. I would say in the short-term, harmless in small quantities. In the longer-term we'd really want to think about it yet.

GROENE: So you mentioned 0.4 percent, and that's what my research here said too, of carbon concentration in the air, or in an atmosphere.

MATT JOECKEL: [INAUDIBLE].

GROENE: And it's 412 parts per million, my guess is from pre-industrial times, of 280. What do we, what number are we looking for?

MATT JOECKEL: Well, I'm not looking for any--

GROENE: Industrial times there might have been a billion people on the planet. Now there's--

MATT JOECKEL: Respectfully submitted, I'm not looking for any number. I'm here primarily-- I am here exclusively to testify about geology. I, I can't answer that question because that's a policy matter that involves all of society. What I left off, and you'll excuse me for this, what I left off in addressing your great question was that not all gases are created equal in terms of the role they play in Earth's climate. If we were to point to one thing over geologic time, and we geologists consider the Earth has an age of 4.5 billion years on the basis of radiometric age dating of mete-- meteorites. If we were to point to one chemical entity that have the strongest impact on Earth's climate over time, it would be carbon dioxide. Carbon dioxide is a particularly effective greenhouse gas, so is methane, by the way. That's a story for a different day. Actually, so is water vapor. So I'll leave it at that. A small amount of, of carbon dioxide goes a long way, apparently, towards changing Earth's climate. We have had an inkling of that since the end of the 18th century. I hope I answered your question.

BOSTELMAN: Senator Moser.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

MOSER: Carbon dioxide, I don't want to say dissolved, but in water happens sometimes naturally.

MATT JOECKEL: Oh, sure, absolutely. Carbon dioxide is dissolved in the oceans. One of the problems that climate change specialists, biologists, ecologists, et cetera, about which they have concern is the acidification of the oceans that relates to additional carbon dioxide in salt.

MOSER: Can some drinking water be pumped out and actually have enough carbon dioxide in it that it could bubble out like soda. Or is that all manufactured by--

MATT JOECKEL: What we-- that's a great question.

MOSER: Sparkling water or whatever?

MATT JOECKEL: Well, it's a great question. There's some natural spring waters that do have some degree of effervescence. I would call that a niche, as it were. There are natural--

MOSER: It's not enough to worry about.

MATT JOECKEL: Well, there are natural carbon dioxide-enriched waters that erupt as geyser. If you want to look it up sometime, there's a place called Crystal Geyser in Utah where a well was drilled and it erupts carbonated water almost like clockwork.

MOSER: Thank you. Thank you.

MATT JOECKEL: Sure.

BOSTELMAN: Seeing no other questions, thank you very much for coming and testifying today.

MATT JOECKEL: As I step out of my role as testifier, please permit me to thank all of you for your hard work on this committee on behalf of all Nebraskans. And again, outside of the role of testimony, I am compelled to say thank you for your support of the University of Nebraska.

BOSTELMAN: Anyone else that would like to testify in the neutral capacity? Seeing none, Senator Flood, you are welcome to close. He

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

waives closing. I do have some written testimony we need from in proponent: Mick Mines Nebraska Corn Growers Association; John Hansen, Nebraska Farmers Union. We do have several letters of-- position letters. Neutral: Nebraska Oil and Gas Conservation; OPPD. In opposition: David Corbin; Mary Green; Shirley Niemeyer; Sierra Club. Proponents: Aurora Cooperative; Lincoln Chamber of Commerce; Nebraska Corn Growers; Nebraska Farm Bureau; Nebraska Economic Developers; Nebraska Electric Generation Transmission; Nebraska Public Power District; Robert Van Voorhees; and Southern Public Power District. I would like to thank all testifiers who came today. This has been very informative. Thank you for your travels. Thank you for coming in. And this will end, close our hearing on LB650. We would-- if folks would please exit the hearing room, we'll go ahead and take a five minute. We'll take a five minute break, then we'll open on our next bill. I think we'll go ahead and, if you're-- would like to open, we'll go ahead and get started. I think others will come back in. If you want to wait, we'll wait. But if you want to get going, we'll, we'll let you go ahead and let Senator Erdman open on LB468.

ERDMAN: You're the, you're the Chairman, sir. Thank you, Senator Bostelman. My name is Steve Erdman, S-t-e-v-e E-r-d-m-a-n, I represent the 47th District in the Panhandle. There's 10 counties in Panhandle. I got good news today, a couple pieces. One, I have another hearing at 1:30. The second thing is I think this is the last time I'll appear before your committee. So let me just say that had this issue not be as pressing as it is, I wouldn't have probably done any of those other hearings that I had in front of this committee. So this is a very significant issue that has been pressing landowners for over 20 years. And I say that because when my son was here in the early 2000s, it was a similar situation and nothing happened. And so today I bring you a bill that would actually stack us up with what the Constitution says, line us up with that. And what it is, is an opportunity for landowners to be compensated when the state takes their property. And so basically, this is a bill to compensate landowners for wildlife damage, gives the agency an opportunity to write the rules and the regulations. It allows for a third-party inspection of the damage and it also will force them to actually manage property-- manage the wildlife, which they have not done for years. And so the bill is very simple, it's a one-pager. On the back, one of the things that I haven't included that I probably should have is the fact that it should have an emergency clause. So we will do that later. But let me

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

start with this, and this is a very important statement and I don't, I don't want to miss it or leave it out. According to our Article I, Section 21 of the Nebraska Constitution it says the following, "The property of no person shall be taken or damaged for public use without just compensation therefore." What I'm about to share with you today is examples of property being taken without any compensation. And when I get done explaining to you what they sustain out there in the country for wildlife damage, you will have to make a choice. And your choice will be, do I believe the landowners are telling me the truth? And if I do believe the landowners are telling me the truth, then you must do something about it. It's very simple, either they're telling you the truth and we need to deal with it, or they're not telling you the truth or lying to you and we don't care. So it's up to the committee to decide whether we actually care about people or not. And so you've received numerous letters of support because they copied me in on those. And I'm going to go through those to make sure you understand exactly what's going on in the country. And today you will not see any of those landowners here to testify. A couple of reasons. One, it's really cold and they've got livestock and things to take care of. But secondly, they're out fixing fences that the wildlife has run through to keep their cattle and stuff in. You don't believe me? Just come out to my district and ask those farmers that have cattle out on cornstalks how the antelope have run through their electric fence and how those people in Harrison are getting ready to load out hay. And when they open up the stockyard, the elk have went to eat the hay before they can load it. So I received a letter from Mark Knaub. Mark Knaub is a resident of Banner County, which is just south of Stinner-- Senator Stinner's District. And he has written to you and showed you some pictures and the pictures were included, and he shows you pictures from his combine of what the elk have done in his cornfield. And he said in his letter he conservatively estimates that he loses 20 percent of his crop annually. Now, let me share with you who Mr. Knaub is. Mr. Knaub and his family are probably the largest farming operation in Banner County. I don't know the number of acres they farm, but it's in the thousands. So I made an assumption he farms 4,000 acres and the total income, gross income per acre is \$500, that's \$2 million gross income, 20 percent of that is \$200,000. So think about that for a second. Every year he loses a couple hundred thousand to wildlife, no compensation. He also went on to say that he never had an elk problem 15 years ago. And where did the elk come from? The Game and Parks had an enclosure just south of the Wildcat

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

Hills that had a 10-foot fence around it. One day, the elk are in the fence, the next day, the elk are in his corn. How did they get there? They escaped or they let them out of the enclosure. So those animals were reintroduced by Game and Parks. Another letter you received was from a gentleman in Morrill County, his name is Butch Schuler. Butch Schuler is a third generation rancher there, raises seed stock, registered Angus cattle. Has a significant, significant pressure from elk. And he has written a letter that I think probably explains exactly what the damages are for him in a way that you couldn't miss if you tried. He says there's no accurate accounting of the number of elk in Nebraska, and it's unavailable that anybody can indicate the sufficient population. It's undeniable there is a lot of elk. High success rates and fulfillment of the resident landowner lottery permits and siting of elk in new territories indicate the plentifulness of game and the opportunity. Nebraska landowners are expected to solely bear the cost of maintaining these beasts, their destruction to the crops and their other property. The rancher should expect to forgo the income of 50 head of cattle for every 100 head of elk grazing their pasture. Assuming an elk weighs about 50 percent the body weight of an average bovine cow, using a monthly grazing rate of \$40 per cow. And he's low, OK, they should be \$50 a month. But he wanted to be, he wanted to be fair, so he used \$40 a month, would result in a \$24,000 lost revenue annually. Calculating the lost revenue opportunity for 50 bovine cows, bovine cows not producing a marketable calf due to reduced stocking capacity, would result in the costing that rancher exceeding \$40,000 annually. All right? Now you understand he's a feedstock producer, seed stock producer, and his cattle are worth more than \$1.50 a pound. And so in a ten-mile radius, ten-mile radius of where he lives, there's 400 elk. And you will hear, you will hear from Game and Parks and they will sit in this chair and they will say, if asked, how many elk do we have? And they will say differing numbers. They've told me 30-- 2,800 to 3,500. Last time they testified, they said 2,500 to 2,800. This gentleman says he has 400 head within a ten-mile radius. And then I will introduce and talk to, talk to a letter, a letter from the Darnall Ranch, which is west of him about 20 miles. They have 150 elk. And then west of him is the Knaub ranch, and they have about 75. So you add those up, that's 625 elk just in that area. So you're telling me that one-fourth of all the elk in the state are in that 20, 30-mile stretch? There's a sufficient amount of elk weigh more than that. So using Mr. Schuler's numbers, it cost him about \$420 a year to feed one elk, to feed one elk. Is he

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

losing something to do that? Yes. His total loss is over \$100,000 every year and he has yield monitors in his combine to prove what his loss is. He can verify what the loss is. There's no question about that. So moving on to the next on, we have several different areas in my area as well. The next letter was sent in to my-- sent to me by Bob Post, Bob Post is a Banner County Commissioner. And, and Bob has an idea that I think maybe has some, some, what shall I say, merit? So what he says is, please, no more shell games, no more shell games where they agree to take some of the game out by designated hunters. Do they think we're stupid? They also seemingly have no actual data to help the decision process. Lastly, a board of landowners appointed by the commissioners, one from each county, to look at the data to be in very much involved in the decisions, possibly with this board, actually would make decisions representative of every area. But they make decisions from Lincoln. So then next, the next letter was from the Darnall Ranch, the Darnall family, they live in central Banner County. And here's what Mr. Darnall said. How does Game and Parks plan to provide the issue of completion-- competition-- how does it solve the issue of competition between the wildlife game and privately owned animals as the spring growing season starts? Here's what's happening at the Darnall ranch. They have a 2,200 acre pasture and they used to stock that rate at a certain level. And since the elk, the antelope and the deer have taken over, they stock it at 50 percent. Coming up this spring in my area, we've had zero precipitation for about eight, nine months. We're very, very dry. So coming up in the spring, when the grass greens up, if it does, they're going to have competition from those wildlife animals on their grass. Will they be able to stock at 50 percent? I don't know. They don't either. If they can't stock it at 50 percent, they've got to put those cattle somewhere. Where do they put them? In the feedlot. And when you put them in a feedlot, it costs you two or three dollars a day to feed a cow in the feedlot. So the Darnall ranch estimated, as I said, they have 350 head of antelope, antelope. They have 250 head of elk or of deer and 150 head of antelope-- of, of 250 deer and 150 elk. They estimate just on losing the grazing opportunity, they lose \$43,000 annually. Now remember they're paying \$5.50 an acre property tax on those acres they can't graze because the animals are graze-- the wildlife are getting them. Think about that. Not only do they lose the \$43,000 income, but they've got to pay the property tax. That's an issue. Very serious. I got a letter from Tim Thomas-- Thompson-- Thomas, he lives in Sidney. He's got an issue with antelope. They got a significant number of

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

antelope that are coming in there, they're eating on the edge of the fields and things and get bindweed. They distribute that in his field. They have an abundance of antelope. And part of the reason is they moved down there from the west part when they had the fires in Wyoming and they haven't ever gone back. Got another letter came from Terry Jessen. Several years ago, Terry Jessen had a, had a pivot, planted a wheat in a very, very fragile soil, that if you eat the wheat off the ground blows. He had 1,000, 1,000 head of antelope on a 160-acre field. One thousand. Not bad, 1,000. What did they do? Oh, they sent him depredation permits. They arrived about three days after the antelope had eaten everything and left. Didn't do a bit of good. Then here's one from a producer Morrill County, his name is Jeff Metz. He said, Jeff writes this: We have a huge problem in our county of overpopulated herds of elk, antelope and sometimes deer. Canadian geese are also becoming a problematic thing for alfalfa and wheat fields. Sometimes the herd of antelope will be over 100 animals. All those antelope need to eat and they really love spring wheat, especially in the summer months. Imagine feeding 100-plus animals all winter long on your wheat fields and grazing your pastures during the spring and summer months. It costs us thousands of dollars a year in lost production to feed those animals that Game of Parks claims are their animals. He went on to say, I'll tell you this, I have never told anyone they could not hunt on my property. Anyone that asks gets permission to hunt any time or anywhere. I get 50 calls a year to hunt, and I have yet to say no to anyone. And I have never charged a fee for hunting on my property. Then here's one from Jim Jelinek. Jim lives north of Alliance. Jim has had a problem with antelope. Game and Parks knows about his situation. They come in there on the fall and they graze his peas and his dry double beans. Last year, they destroyed two pivots of both. He went in and planted wheat, put the fertilizer on to plant irrigated wheat, the antelope come back, ate the wheat off. And I don't know if you remember about a month ago or longer, we had significant winds of 70, 80, 90 miles an hour. Blew his wheat out. So he lost two pivots of wheat, but the antelope are just fine. They don't need to worry about it. Just we'll be OK, we're going to send you some hunters. And they sent him like 17 hunters for 200 or 300 antelope. And those are, those are year-round residents there. So Mr. Jelinek, and I know Jim quite well, he is concerned about what's going on and the lack of management. And he's one of those guys that if you don't want to manage him, he'll help you. And so what's going to happen is we continue to put these people under this pressure and

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

we continue to take their products and their produce and destroy their fence with wildlife, they're going to start shooting them. Don't believe me? It happened a couple of years ago in Morrill County, it's going to happen again. Because what's going to happen is these people are going to get to the place they say, I'm losing \$100,000 a year to these animals, what's the fine? What's the penalty for me shooting them? That's what's going to happen. You know, just watch. And so that is why it's a widespread issue here. Here's a letter that came from Harrison, Nebraska, and he went on to talk about the fencing, keeping the elk out of his, out of his hay piles and his hay yards. But he said they've ruined some of our tree windbreaks. We've had to take trees out because they've damaged and destroyed the trees. And somehow he said, it bothers me that the Game Commission seems to always have money-- seems never to have any money to pay for damages, but they always seem to have enough money to buy more land. Kind of peculiar isn't it? We can't take care of damages, but we can sure buy more land. So then Spike Jordan, Spike Jordan and his dad, Daniel, live north of Harrison. They've been there, this is a sixth generation rancher, been there six generations. That's quite a while. I think you understand what conservation is. So he's been there six years. He said, in our opinion, is that the Game and Parks Commission fundamental, fundamental mission of ensuring a healthy and sustainable population of wildlife in the state is a noble one. And we were reluc-- we were reluctant to criticize the education of the wildlife biologists who asked to carry-- who have been asked to carry out this mission. I am sure they have rational intentions behind the decisions they make. There is an agreement to be made that we should leave this management to the experts. However, we have expertise and experience to manage our natural resources. We've done it for six generations. He said that while deer, that while the deer jumped the fences, the elk simply plow straight through in reckless, in reckless abandonment and rip out whole sections of the fence. Sometimes this damage is so significant the whole section of the fence must be rebuilt in order to ensure our pastures are fit for rotational grazing our cattle. Trying to manage not only grass but the fences proves to be a never-ending chore. However, on the business side of that house, Game and Parks collects revenue from hunting permits, sports, sportsmen recreation and this, this other way-- that is in no way translated to the state compensation, the depredation or damage that we occur. In fact, boarding the wildlife and paying for property damage and resources that technically belong to the state, we feel it's only right that the

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

state chip in and offset the cost of maintaining the wildlife on our land. Those are the issues that I think you have to deal with. Are these people telling you the truth? Are they sharing with you what's happening to their property? I contend they are. All right? So I met with the president of Game of Parks' board, as well as Mr. McCoy in Alliance on December 21 of this last year. I shared with him the letters from Mr. Darnall and Mr. Schuler, and I asked them, what is it that you're going to do going forward to help them alleviate that pressure on their grass and their crops this spring? And then I asked, how many elk do you actually have? And he didn't know, but he guessed between 2,800 and 3,500. And I just shared with you there's 625 in a small area. I contend that number is 5,000 or maybe more than that. So here's what I did on the way home. When I got home, I figured that up. Say we have 3,500 elk, and I asked him the question, how many of those are female? And he said-- I said, probably about 60 percent? And he said, yeah. So I took 3,500 head, times 60 percent, that's 2,100 of them are females. Then I made an assumption because I used to raise cattle and I knew how many cows would be pregnant every year, so I used 80 percent of those, 80 percent of those females will have a calf. Eighty percent. Then I asked him what the survival rate was of these young elk, and he said somewhere in that 70 to 75 percent range. So I used 70 percent. So 80 percent of the 3,500 is 1,680 head. Seventy percent of those make it to a year old, that's 1,180, all right? They issue 510 permits statewide last year, 510. I'm going to make an assumption that 75 percent of those were fulfilled. They killed 75 percent of those 510, which is about 380. So they shot 380 elk. But we had an increase of about 1,180. So you do the math, that's about 800 new elk this year compared to last year using their 3,500. But if you go to 5,000, it's even worse than that. So here's the point I get-- I want to make. So to get even, to stay even at 75 percent, they would have to issue 1,600 permits if 75 percent of those killed an elk. If you want to reduce the elk numbers, if you want to make a reduction from one year to the next, say you wanted to reduce by 20 percent, all of a sudden you have to, you have to allow another 1,060 permits. So if you want to reduce-- if that population grows like I said it did, just to reduce the population 20 percent, you have to allow 2,660 permits, hoping that 75 percent of those will kill an elk. Is that a problem? They're going to increase the payments to what, 600? Or they may go real bold and go to 700. This is a problem with management. And as I said earlier, if they were managing this wildlife for the last 20 years, I wouldn't even be here talking to you. So why

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

did I put in a, a bill to elect the commissioners? Why did I want the Governor to appoint the director? Why did I want to do all that? It's because I've tried for four years to get something done with these people, absolutely nothing. They paid total disregard to the Constitution. You can't take somebody's property without compensation. That's exactly what they're doing. Now you're going to hear from paid lobbyists, you're going to hear from people that come in to talk about we've got to have wildlife, we're going to have opportunity for hunters and sportsmen. I understand that. But you know why there's no paid lobbyist for the landowner? They can't afford it. Secondly, they're home fixing fence, they're home keeping their cattle in from the wildlife destroying their fences. So they sent me. So I'll just tell you this, this is my sixth appearance in front of your committee. I'm not going away. Lord willing, I'm here next year, you're going to see me again, and you're going to see me every day, every time until we get this fixed. And Game of Parks needs to understand one thing, I'm not going away. All right? They've been here and they've been testifying, and every time they don't have a clue what they're doing, they don't have a clue to fix anything. Those people sent me here to tell you their story, I've told you their story. It is a true story, and you need to understand what they're trying to say. So I've got to deal with what I think is the most hilarious fiscal note I've ever seen in my four and a half years of being here. Absolutely one of the strangest fiscal notes I've ever seen in my life. They contend, they being Game of Parks' fiscal analysts, that the implementation of this bill is only going to cost \$117 million. That's not bad, \$117 million. So I have to admit that I appreciated them sending that, the fiscal note, because here's the part that makes a lot of sense for me. On the middle part of the first page, it says the total acres inspected under my example, my bill, would be arrived by taking the total number of acres of corn, bean and wheat harvested in Nebraska in 2019, multiplied by 75 percent. The 75 percent factor, here's the key. Listen to this. The 75 percent factor was used as this was the percentage of landowners who indicated that they had crop damage due to wildlife during the recent landowner survey completed by Game and Parks. They're telling you that 75 percent of everybody who owns land in the state of Nebraska has damage from wildlife. Seventy five percent. The fiscal note went on to say that the management of this, this bill was just a mere \$29 million. And when I asked what that was for, it was to hire consultants and crop adjusters to adjust the damage that the wildlife were causing. That's 400-- over 400 full-time

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

inspectors. You know what this fiscal note is? I'll tell you what it is. It's a CYA, anybody ever hear about that? That's what this is. This is a CYA. This is crazy. Anyway, if he had any understanding of what the bill said, and if he had any understanding what he has to do next, when he has to do next is he has to write a fiscal note for my other bill that I had introduced that will be coming before the Appropriations Committee. Let me get the number for you so you'll know. It's LB469. LB469 takes \$10 million out of their cash fund to pay for damages to wildlife. So how can a bill that has an appropriations bill for \$10 million cost \$117 million? I, I think I know. CYA, OK? And then they went on to talk about in the bill that you couldn't do that and their fiscal note because it's a violation of the statute and it's against the Constitution, whatever they said. Well, let me, let me read to you what it says on one of the statutes they said that we were going to violate. All right? It say the state of Nebraska hereby a-- assents to the provisions of the Act of Congress entitled An Act provided by the United States shall add-- shall aid the state in fish and restoration of management projects. Management projects. Managing wildlife, isn't that a management project? Sounds like it to me. And it goes on to talk about the establishment of a cooperative fish restoration and management projects. That's what this is. It's a management project. Had they been managing this for years, we wouldn't be here. All right? So how they can eliminate having this obligation to pay damages is very simple. Manage the wildlife. That's how you get out of this. They can work their way out of this, just manage the wildlife. But they haven't done that for years and they're not intending to do it. And so consequently, when I bring this bill today, I'm asking you on behalf of those people who have written that testimony, their testimonies and those people who have suffered wildlife damage over the last 20, 30 years because of lack of management. I'm asking you to give them some help. Now, when you have them come up today and they will tell you about we can't do this because of the statutes and we're required to do that, ask Director McCoy one question for me. Ask him what his plan is in the spring to help alleviate the pressure of wildlife on those people's pastures and their crops. Ask him that. I'd be interested to hear what he answers. So if he doesn't answer, I'll give you the answer when I come back to close. But it's time to hold these people accountable for what they do. And with that, I'll close my opening and I'll stick around for closing.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: Thank you, Senator Erdman. Any questions? Senator Moser?

MOSER: How wiley are elk and antelope? I mean, if you try to get close to them to hunt them, do they take off and hide or how do you hunt them? Do you have wind or--

ERDMAN: It's, it's a lot easier to shoot the first one than it is the second. You know, and, and they had depredation permits last year. They had 50 depredation permits for Mr. Schuler and they shot 8 head. So it's not as easy as it sounds. But years ago, several years back, they had a tremendous amount of deer population in the Lincoln, Lincoln County near North Platte, and they shot about 200 deer because there was a deer on every mile on the interstate and they shot about 200 of those. So there's an opportunity for us to work with the hunters. That's what they need to do, work with the hunters, issue enough permits to make a reduction in the population. This won't be solved overnight. But I can tell you this, in my example, they're not even trying to reduce the herd. They're trying to grow the herd. And that's the way it's been, that's why we got the problems that we have.

MOSER: How tall of a fence can these animals jump? I mean, would it be possible for these farmers to fence their crops and keep their life, life, the wildlife out.

ERDMAN: They can make a-- a fence has to be eight to 10 feet tall. But I'm sure Mr. McCoy can explain that to you. It has to be a significant fence. It does. Because what happens-- but the antelope, they go under, they go under the fence, Senator. They just, all of them will go under the same place until they pop the wires off your fence or break your posts off. They don't jump. The deer will jump over, if they can get over. The elk just run right through it. The elk are big enough, they don't care. They just run right through it.

MOSER: More like a buffalo or something. I mean, as far as-- what's an elk weigh?

ERDMAN: Eight hundred to 1,000 pounds, a big bull elk will weigh that much.

MOSER: Thank you.

BOSTELMAN: Senator Groene.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

GROENE: And you mentioned my Lincoln County. We have elk and the guy who wanted a hunting permit on his area because they had too much elk. As soon as the Game and Parks issued permits in that area, he went private and to the highest bidder. So he's got 300 elk and he-- and the guy who leases his ground, the multimillionaire, comes in and says, I've got-- me and my buddy is going to shoot two of them, and I don't care if he gets depriation [SIC] on the ground because he makes more money from them than he does range and cattle through them cedar trees. So how does the Game and Parks supposed to manage that?

ERDMAN: So, Senator Groene, let me see if I understand what you said. So the person is managing the-- keeps the elk on his property so he can sell?

GROENE: I mean, they'll, they'll leave the ground, but he won't let anybody hunt there, but--

ERDMAN: Right.

GROENE: And he don't care how much damage, grass is ate because he gets enough from the, from the--

ERDMAN: Right.

GROENE: --sports hunter that he doesn't care. But his neighbors have a lot of damage. I mean, it's a problem.

ERDMAN: It is a problem. It's very similar. I would compare it to this. It's very similar to the prairie dog issue, it's very similar to the noxious weed program. Those things are very similar. If I control my prairie dogs and my neighbor don't, I just as well not. And so there are people who plant feed plots for elk, that want to keep them on their property and they keep them there. That's a difficult, it's very difficult to manage that. But, Senator Groene, they don't even try to manage them where they have the opportunity to manage them. They just want more.

GROENE: You probably know an instance, a good friend of mine and one of your constituents, my first year down here, or second year, he had a herd of antelope that would never leave his wheatfield. You know that situation. And he had two young men who worked for him and he kept complaining about them. He fol-- followed all the rules, they got the fireworks, tried to scare them off. Well, his two hired men are

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

going to help their boss off. One night they went out and shot them. And they didn't leave. I mean, the elk didn't run away. They shot 65 of them. Those two young men can never hunt in state of Nebraska again. They lost their hunting permits, they went to jail. If that was coyotes attacking sheep, they would have been local heroes. I agree with you, we got a problem here. And you can't afford to lose a wheat crop on leased land, which he was use-- losing year after year after year. The landlord said, we got to do something. Game and Parks, they were real proud about the convictions they got. Really proud, they advertised it all over the place, and those two young men had, their lives were ruined. So I agree with you, we need to do something.

ERDMAN: Right.

GROENE: You know of that instance, don't you?

ERDMAN: Yeah.

GROENE: Yeah.

ERDMAN: I do.

GROENE: Thank you.

BOSTELMAN: Senator Gragert.

GRAGERT: Thank you, Chairman Bostelman. Thank you for your testimony. You know, we went out there and we heard, and there is a problem out there. I think probably everybody in here, you know, and the Game and Parks would agree with you, there's a problem out there. My thing is, is like you went through all the numbers there and we need 1,100, 1,600 permits. And all through them letters there was one person that let 50 guys hunt. You know, and that's not very many letters, I'm sure there's a lot of other individuals out there. My thing is, you know, there's, there's not a silver bullet to any of this. It's got to be, it's got to be a hunter, the Game and Parks and the producer come together and let's take care of this. Let's address this substantially, OK? Now, what number is that? And the thing is, is that if they put out there 1,100 to 1,500 permits, are there going to be enough producers for 1,100 guys at this point to even get out there and take care of the, the issue with just hunting alone? Hunting alone is probably not going to take care of where we're at, where it may be out of control at this point. So now what's, what's the other step

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

that we're going to be, you know, have to take to at least get this these antelope, the deer, the elk back in control? Well, I submit it's got to be something more than just hunting. But that's the long-term effect. I think that's where we, you know, kind of getting into the issue, is that there hasn't been enough hunting out there to control the herd, you know? Now other, and other things that somebody mentioned, a fence, there's-- you can fence elk in or out with that 10-foot, 8-foot interwoven fence--

ERDMAN: Right.

GRAGERT: --and keep the animal out. But I see that more as an option than paying \$10 million or \$20 million every year on property, you know, crop damage. We've got to take preventive measures not-- and be proactive, not reactive and going out there and paying every year \$10 million.

ERDMAN: Senator Gragert, I appreciate, I appreciate your comments. You are exactly on the same page I am. The solution is all three of those groups, as you mentioned, getting in the room together and negotiating it. Never happens. Never happens. It's Game and Parks and the hunters and they never bring landowners in to talk to them. So the gentleman who had the problem with all the elk, he has sold two elk permits in the last-- since 1986. They harvest hundreds of deer off his place, he lets people hunt. Right? So Jim Jelinek gets 17 hunters to shoot out of 300 antelope. What did that do? Nothing. So the problem is Game and Parks is not willing to make a decision how to handle the animals. Because I agree with you and I've said all along, the solution is the hunters, the landowners and Game and Parks coming to a conclusion, how many animals should we have and how do we get there? And we've let their population explode to where we have no other choice but to do depredation. There's only-- that's the only choice there is. And we've got to get these numbers under control soon. We can't allow these producers to sustain another \$100,000 loss in 2021. We can't let those people suffer \$50,000 loss in '21. We can't. We know they have a loss. And what are we doing about it? Oh, you know what? We're going to work on that because we're going to increase the permits. When they increase permits on the antelope, it was like nothing. I mean, these people aren't interested in decreasing the numbers. If they showed a little bit of interest in having the landowners' best interests at heart, it would make a big difference. I mean, shooting those eight elk last year didn't do anything, didn't do squat. You know what it

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

did? It chased the elk from his property into his neighbor's cornfield. He said, what kind of neighbor am I? They come out and shoot eight elk on me and they run over to my neighbor's and destroy his corn. That's not the solution. The solution is less elk.

GRAGERT: You know, kind of amazes me that up in northeast Nebraska, we have elk, you know, and individuals that raise elk and the big bulls. And they have no problem selling all the bulls for thousands of dollars. Guys will come and just shoot that elk out of a pasture. And it's like, that's the elk hunt, you know? And if these guys, you know, out there would let, you know-- it isn't letting people hunt, they could, they could they could raise all kinds of money, I would think. Let, letting people shoot elk.

ERDMAN: Senator, here's what happens. You go out to the ranch and you tell the, and the guy has to show you where his ranch is, where his boundaries are. They go out and they're stalking these animals and then they jump the fence or run through the fence onto the neighbor. He don't have permission to go over there. How does that work? It doesn't work. We could have a depredation permit area-wide so they can go in there and shoot those animals and eliminate the numbers. I mean, just letting them hunt. They let those people hunt. They don't-- here's the secret, they don't want people hunting. All right? This guy has got registered cattle, those cattle are worth \$5, \$6,000 apiece. Want somebody to go out and shoot one of those?

GRAGERT: Yeah.

ERDMAN: I mean, it's, it's not, it's not that simple. These people aren't interested in having hunters. You want to send a game warden out to go with them to show them where they are? Fine. They got work to do, they got cattle take care of. They got crops to harvest. They can't get out of their combine and say, oh, today, this afternoon I'm going to go help this guy trying to find an elk. No, that don't happen.

GRAGERT: And for the record, there's nothing simple about this at all.

ERDMAN: I understand that.

GRAGERT: There is not one thing simple about [INAUDIBLE]--

ERDMAN: I get that. But Senator Gragert--

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

GRAGERT: --this back in. And I realize that, it isn't simple to say, hey, why don't you just let them come in there and-- because I don't want to get your letters. I don't want to get all these letters. But the thing is that it's not simple and but it's going to take a lot of coordination and communication and cooperation to get this fixed.

ERDMAN: Yeah. And it should start with Game and Parks. And they haven't done squat in thirty years. That's why I introduced bills to change the management, to change the board of directors. So they understand the significance of what I'm trying to tell you. You get it. They don't. And they're going to come up here and tell you that they, oh, we got all the answers. Well, you ask them what their answers are, I'd be, I'd be interested in hearing. Because I've asked and I've gotten zero.

GRAGERT: Thanks.

BOSTELMAN: Seeing no other questions, thank you, Senator Erdman for opening. Thank you.

ERDMAN: Thank you.

BOSTELMAN: Anyone would like to testify as a proponent for LB468, please step forward. Good afternoon.

JOHN ROSS: Good afternoon, Senator Bostelman and members of the Natural Resources Committee. My name is John, J-o-h-n R-o-s-s. I'm a landowner, I've been farming since 1971 on my family farm. And I've seen deer go from zero to way too many. Game and Parks came up with some ideas of how to control the herd, but in my opinion, very few of them work. Earn a buck. Shoot a doe first, then you can shoot a buck. The buck hunter said, we won't buy permits, we won't do that. Then they had a bonus tag. Well, you could shoot your buck or your doe, either one, but you was allowed a secondary deer. Most of the people that trophy hunt bucks will not shoot an antlerless deer. I have way too many deer on my farm. I was losing from three to five acres a year out of 250. That's quite a bit of money. Part of that time I was having a second job in the 80s so I wouldn't go broke. They said, let hunters hunt. I invited many hunters to come hunt. But not a one of them would shoot an antlerless deer. I'm a buck hunter, that's all I hunt. Game and Parks has listened to the special interests, they haven't listened to the landowners that are footing the entire bill of

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

feeding our wildlife that belongs to everybody. And I understand that this wildlife belongs to the people of the state of Nebraska. And in some instances, the federal government has control over migratory wildlife. I suggested that they have a season for one year, antlerless only. And they said, no, no, that won't work. Too many people, if they cannot shoot a buck, will not buy a permit and we are going to lose too much money. Well, I was losing a lot of money when there was too many deer on my farm. So I don't know. I know it's a tough battle to figure out how to pay these farmers or ranchers for the damage. How do you estimate how much it is? I understand it's a complex issue, but I think it's time something needs to be done. With that, I'll conclude my testimony. Thank you very much for your time.

BOSTELMAN: Thank you. Thanks for coming and testifying. Is there any questions from committee members? Seeing none, thank you for coming in.

JOHN ROSS: Thank you.

BOSTELMAN: Next proponent for LB468. Seeing none, anyone would like to testify in opposition, as opponent to LB468, please step forward.

TIMOTHY McCOY: Good afternoon, Chairman Bostelman, members of the Natural Resources Committee. My name is Timothy McCoy, T-i-m-o-t-h-y, I am the Deputy Director in Nebraska Game and Parks Commission. The commission is opposed to LB468. We are very concerned about fiscal impacts. I will explain more about that in, in a second. We understand, our commission, our board of commissioners and our staff understand are very well aware of the landowner concerns about wildlife, especially as we heard damage about deer, elk and antelope to agricultural crops. It's a big issue. It's a complex issue. We're trying to find different tools and ways to deal with that. I would also note that Alicia Hardin who leads our wildlife division will be following me to provide more information on the actions we have taken and to continue to work on to address these concerns. I'm going to focus on the language of the bill. I'm gonna focus on this, because when we looked at the language in this bill relative to the fiscal note, there are some critical questions. One of those critical questions as we look at it, the bill states that while, while we can't-- we can create regulations in order to figure, to make the payments, what the requirements are for making a payment, statutory language at the beginning of this, of this bill and at the end make it

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

very clear that, that we are, that we will be required to compensate a landowner for any damages to landowner's property caused by game animals or game birds and at the end that we shall pay compensation claims. My experience in dealing with our statutes, when something says shall, we don't have the option to limit that unless it is defined in statute. I bring that up because as we look at, as we read this bill, it's very expansive in scope. There's no definition of landowner. If you're going to use the common definition of landowner, it's anybody that owns land. If you're going to use the common definition of property, it's, it's anything that they know. We were concerned about impacts. You know, what about car accidents? So, so I do think there are some technical issues with this bill. And they did raise great concern. I would also point out the language identifies paying for damage from any game animal, which includes antelope, antelope, cottontail rabbits, deer, elk, mountain sheep, squirrels, mountain lions, moose and bears; or game birds, coots, cranes, curlews, doves, grouse, partridge, pheasants, plovers, prairie chickens, quail, rails, snipes, swans, woodcocks, wild turkeys and all migratory waterfowl. Our interpretation is that payment would need to be made to any landowner, rural, urban, suburban and any property. That's expansive. I'm not sure that that really is addressing the issue that is at hand here. Again, my experience looking at, looking at statutory language, when it says shall and does not say may, I don't think we can remove any class of property owners or types of property. There are other questions, such as if damage can already be claimed on an insurance policy, how would those payments be handled? Would this obligate the commission in the state to pay the same damage as some insurance companies? Or if passed, would those insurance companies require the person who has the damage to first make a claim with, with the commission, make the state of Nebraska pay for it? Language on specific appraisers was a little difficult, difficult for us to understand. I'm not sure how we would expect an appraiser to determine if damage was caused by a game animal or bird, or if it was from other wildlife that's not game. It also would appear to us looking at this, that this is more of an area that an adjuster would likely be, be able to do, not necessarily an inspector. We have concerns that landowners who are not willing to provide access, as Senator Groene mentioned, that they would be eligible for compensation, even though they, you know, they don't really, they aren't worried about opening hunting. If we cannot get reasonable access to solve this problem, I, I do worry, we worry we could

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

perpetuate this problem. We'll just pay for it and we won't solve the underlying issue. My board of commissioners, our agency, my wildlife division, we are, we are committed to trying to get to better solutions and to solve this issue. Will we be able to do it immediately? It may take, it may take some time. We would, we would like to see Senator Gragert's bill that was in front of this committee to help us develop some more tools to be able to address quick-response issues where damage is occurring, to have more flexibility. I think having that will help us with the tool. But, but again, it is going to be a challenge. We are concerned about it. We spend more time talking about this with our commissioners and our staff probably than any, any issue in the last three years. It's a big deal. With that, I will close-- I'll stop, my light is red.

BOSTELMAN: Thank you, Director McCoy. Any questions from members?
Senator Groene.

GROENE: So what you're saying is, I agree with Senator Erdman there's a big problem. But my neighbor, I walk into his cornfield, I just cut grass. First three rows, we're on the South Loop River, and the first three rows by August, the coons have cleaned a bunch out. And then when the deer come in, they clean out-- the inrows are basically donated to the livestock, you go further in, the less damage. So he lives with it, but he could make a claim on that small, that amount of damage, even it might be just one acre, two acre total.

TIMOTHY McCOY: The way I read this bill, we have no-- we couldn't limit that. They would, if they submitted, if they submitted a claim, if the-- if the, if Senator Erdman's interpretation of what this does is different, I think we need some language to clarify that.

GROENE: So the game as the member said, the testifier said, it belongs to the people of Nebraska, not to the landowner. Is that correct?

TIMOTHY McCOY: That is correct. We manage those in trust for the state of Nebraska.

GROENE: So could we do something to reverse where stop this big game stuff? I'm not real fun in this big game stuff because I grew up a poor farm kid and it's becoming a rich man's game. The average person can't go out and hunt anymore because they're leasing the land. Could we, could we do something to say, all right, you, you put a complaint

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

in, all right? You put a complaint in your damage. We're going to come out, the game warden is going to come out and he's going to assess it. And then he's going to make a decision how many permits. You're going to rely on him to make on that area. But that landowner then has to have open hunting. He can't then turn around and say, all right, now I'm going to, I'm going to charge people to come on this land and hunt. Could you do that?

TIMOTHY McCOY: If we made-- well--

GROENE: I mean, legally.

TIMOTHY McCOY: Legally, I don't think we can-- I don't-- it's a real challenge. Landowners control access. I don't know that we can force access. We do have a program that we, that we pay, pay landowners to walk-in public access. I will tell you, when we have lands enrolled in walk-in public access and public lands, they get used very hard by hunters. They kill a lot of animals on there. More proportional on those, you know, higher harvest proportionally than on private land.

GROENE: But somehow you've got to pinpoint the problem. By increasing permits over a large landmass when they're only focusing on the river or, or certain irrigated cornfields because everything around it's grass, you have to focus on that somehow.

TIMOTHY McCOY: Yeah.

GROENE: Because that's where the game is, right?

TIMOTHY McCOY: Yeah, that's, that's, you know, that's part of, that's part of what we're really trying to do in, in with the, the bill that would allow us to do depredation seasons for deer, antelope and elk.

GROENE: And when you say depredation seasons, that's outside of the week or 10 days that you have in your--

TIMOTHY McCOY: That would be. Yeah, it could be that-- it was, it was written generally so those could be held in a quick-response fashion in an area where those issues are happening and, and not tied to the season but not-- but also they could be used within a season. And the specific talking about within a season was concerned with elk in cornfields in fall.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

GROENE: Because in my experience, and everybody's is in my area, they don't start congregating in the huge groups until well after the season. All the crops are out and it's-- right now I can go drive my river road, I call it, and I'll see a herd of 50 to 100 in some fields, alfalfa fields. But that's, what, a month, two months, three months after the regular season. So you could pinpoint and that, you can do that now or is that a bill that's--

TIMOTHY McCOY: That's a, that's the bill, that's part of the bill that we brought that you guys heard earlier in the, in the--

GROENE: Right now, you can't do that. You've got to stay within the seasons?

TIMOTHY McCOY: Right, right now, the tools we have are hunting during the season and depredation permits. And the challenge, the challenge becomes trying to do population management in those areas where we're having problems, where, you know, in some cases it's hard to show that they're doing active depre-- they're doing active crop damage at the time, which is the way the depredation statute is written that allows us to do damage control tags where we give them out.

GROENE: I understand. Thank you.

BOSTELMAN: Senator Gragert.

GRAGERT: Thank you, Chairman Bostelman. Thank you for your testimony, Mr. McCoy. I'm going to go back to, and once again clarify this. There's nothing simple. And I don't, I don't, not anything I say is going to think that this is a simple issue. It's not. But to what Senator Groene was visiting about on depredation on a individual's land, as we seen last, whenever you did at last, didn't really, didn't do a whole lot. They, you give them 50 permits and they shot 8, 8 and they chased them off onto the neighbor. This needs to be a regional thing like this, like this bill that, you know, just carried is coming out is a regional thing, as I understand it. But I also would like to ask you that, you know, Senator Erdman has a whole different take on how many elk are out there versus what the Game and Parks has, first of all. So it's a, for me it's right now it's a he said, she said or, you know, kind of thing. And can we tighten that down and for short-term, quick reaction, how many permits is that going to take? Do you feel that you have enough permits out there to get, I mean,

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

they're looking for instant, I mean, right now a short-term is instant. I'll say, and I don't want any letters on this one either, eradication of, of, of big game animals, on deer and elk and antelope. You know, to get, to get them under control or take what, 50 percent of them. But logistically, you know, how are we going to move forward in a where we're going to please the landowner and not get 14,000 letters from a big game hunter, you know? That's my take on, on how does it come together? You know what, it's not really a fair question for you, because it's so complicated and that's what I'm trying to make out of this whole question, I guess.

TIMOTHY McCOY: No, it is. It is, it is. It will be a challenge as we continue forward. Like I said, I do have our wildlife division chief here who, who actually has been working with our staff of more on that information to tighten those down, to look at population models. With elk, one of the things we always have to keep in mind is, is normally they consider that most elk will not become sexually mature until their second fall, although it does appear that you might get some that breeds, you know, at a year and a half. That makes some of the management, as we're looking at our herd numbers, we try to look at, they also look at cow-calf numbers to get an index of what proportion of those are animals that are going to potentially breed in the next year. I bring that up just because it is a challenging issue. And we've spent a lot of time and I believe there's, you know, I know there's frustration from senators and there's frustrations from landowners. And I think there's some frustration within us that we're, we're not getting there fast enough. And, and I-- we've got to keep going and we've got to, we've got to keep going and we've got to do more.

GRAGERT: Thank you.

BOSTELMAN: Senator Moser.

MOSER: I'm sorry if I missed this question while I was out for a minute, but what about if you get a complaint from a landowner that you would have a special season or a longer season and a larger number of permits issued for that area so that the hunters could still hunt and the landowners would have fewer animals to contend with?

TIMOTHY McCOY: We've actually, we have extended seasons previously, we've actually extended the length of elk seasons. In the last year,

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

we've extended the length of the antelope season trying to get more antlerless harvest to, to do that. The challenge we have is that those permits in those seasons are on, you know, a unit basis, which is a really large chunk of the state. That's where I think some of the, some of the trying to be able to do this with special depredation hunts would allow us a lot more flexibility in targeting into those areas to deal with them and, and, and essentially identify a quota of animals to be killed, have unlimited permits that would be available to landowners and to hunters and, and try to allow the people that either the landowner is comfortable with letting on or as many as he's letting on, or if he or family members, you know. Trying to really, trying to really get into that and deal with these issues, not just on a single landowner, but in the area where we're having those problems will help us with that tremendously.

MOSER: OK, thank you.

BOSTELMAN: Senator Hughes.

HUGHES: Thank you, Director McCoy, for coming yet again. It's always a pleasure to see you. So do you think that we have enough hunters to take care of the problem? Even if we have these antlerless seasons and, you know, extra seasons, are there going to be people who are going to want to show up and hunt deer this time of the year?

TIMOTHY McCOY: I--

HUGHES: And I want your opinion.

TIMOTHY McCOY: My, my opinion from what I'm seeing right now is, and I've not, I've not saw the latest harvest numbers from last year, but just from kind of watching from where I sit, I think that we continue to see, I think, pretty good interest in, in antelope, doe, fawn, antlerless elk. In terms of permits, I would say deer is the one place where we, we don't sell out all of our antlerless permits and, and our, our harvest seems to have sort of, sort of stalled out where we've got it up fairly high but, but we want to get it higher. And I think part of that is just more conversation with the hunters and the sportsmen about the importance of antlerless harvest is going to be key in helping resolve these issues or we will, we will continue to be back in, in more dire straits. And that may, that may include, you know, we've got a couple of units right now that I, I believe our

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

folks are thinking about doing earn a buck again. We've had pervasive issues, added additional bonus tags, and we're struggling getting the antlerless harvest we need. There's a lot of big buck hunting in that area that makes it tough.

HUGHES: Thank you. And I want to apologize to the committee for being called away. So if I am redundant, my apologies. So in that vein, I think we're going to have to give more latitude to the landowner to manage the problem, because the way, and yes, I am critical of Game and Parks, you understand that, especially in the deer area. You know, we've had discussions about that for over six years, that what you're doing is not working. And the landowner is the one who's there every day and sees the damage, you know? And if there aren't enough hunters to, to keep up with the problem, you know, Mother Nature is very good to our wildlife, that we've got to try something different. Because Senator Erdman's fiscal note, you know, I calculated the number at 60 million just what it costs to feed the deer of the state. And you add elk and turkeys, and not to mention vehicle damage. You know, we're talking hundreds of millions of dollars that are coming out of the economy that needs to be managed a little bit better. So thank, thank you for coming in for a little additional verbal abuse. I appreciate that.

TIMOTHY McCOY: That's the job.

BOSTELMAN: Senator Groene.

GROENE: Thank you. I have a constituent, a friend, large farmer, and you probably know him because he's very familiar with Game and Parks. He puts bull racks on all his pickups and he encourages his employees to hit every deer they've got a chance to hit when they're on the road. He tells them to accelerate because he doesn't want to break the law to shoot deer out of-- they're varmints to him. I don't know what you do, but somehow we have to control this, come up with better ideals.

TIMOTHY McCOY: There are-- we hear diverse opinions from landowners about how many wildlife they want, and we hear often very diverse opinions from what landowners want, from what some of our hunters want, who think it should be like watching a TV show they've watched and they should just be able to filter through a series of big bucks until they find the one they want to shoot.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

GROENE: Thank you.

BOSTELMAN: Senator Gragert.

GRAGERT: Thank you, Chairman Bostelman. Just one last, you know, and, and hopefully this can, can be kind of like me thinking out loud, but that's what I'm doing right now. The, the thing about depredation permits, OK, and giving a landowner 50 permits. What about giving a landowner 50 permits, and I know when we had a discussion before, it was said that the Game and Parks would give them all the permits they want, basically. But then when you shoot one, they take off. What about giving a landowner 50 permits for the entire year? Shoot it whenever you want to shoot it as they come back and--

TIMOTHY McCOY: As an agency that does, has law-- wildlife law enforcement responsibilities, I think that would, that would be a pretty concerning pretty fast. And the concern would be it pretty soon it's poaching season for everybody. Sorry, that's my offhand comment. I don't mean to be flippant.

GRAGERT: That would probably take care of the problem then, wouldn't it?

TIMOTHY McCOY: Well, and you mentioned when we give, when we give landowners a damage control permit for a number, they also can identify shooters on that permit. Most of them do. And most of those are people they know that are familiar with their land that hopefully can kill some of those animals.

GRAGERT: Thanks. That's all I had.

BOSTELMAN: All right, I guess, I, to me there's-- Senator Erdman asked a question, why could do it in the spring. I think you only have one choice. Senator Hughes said, we'll give the landowner the opportunity to shoot animals, however many permits. But he did that this last year and there was an uproar in the state because someone got 50 permits to shoot elk. Well, that's not going to work. So to me, really, the only way that to manage, if you're gonna do an immediate management is you're just going to have to have your law enforcement people or whomever, you're just gonna have to go out to an area where there's a lot of deer, like what Senator Groene says, there's a lot of elk wherever they're at, and you're just going to have to cull the herd.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

That's the only way you're going to have an immediate impact on the herd. You're just going to have to go out and kill animals. And the problem with that is when you kill animals in spring, you got, you got does and cows that are carrying calves and fawns, you've got bucks and bulls that you don't know what you're shooting. So you don't know whether you're actually doing an impact on population or not. So what do you do with those animals? Well, then what you do with those animals is you have a refrigerator truck, for lack of a better term, and you load those animals up in there and then they get processed to give to the homeless. I don't see any other way if you're gonna do an immediate impact, other than coming up with millions of dollars and some process this spring, that you're going to be able to, to begin to address the situation. And it's not just in western Nebraska, it's in northeast Nebraska. It's all across the state. And I mean, that's just the challenge that we have is if you're going to do an immediate impact, then you're just going to have to go out with individuals into an area and you're just going to have to start culling animals and then picking up the animals if you can, get them processed and take them into, put them into, take them into the shelters. The hungers-- hunters feeding the hungry. I mean, that's, to me, that's, that's really probably your only option.

TIMOTHY McCOY: So I think there's, yeah, the challenge, the challenge is what, what other, what other blowback does any any of those immediate options have? And, and I believe there will be with any of them.

BOSTELMAN: Senator Moser.

MOSER: Real quick question. How about getting back to Erdman's bill here, because we kind of got off on a tangent of other ways to solve the problem. But I'm sorry, Senator Erdman's bill. What if he would rewrite it so that they had to have a certain percentage of damage before we would compensate them, say it had to be 10 percent or 25 percent or something, so that you don't get into all those trivial little payments where guy has got two deer in his cornfield or something, you know. But, but the guys who have their whole crop ruined, I can see, and I have sympathy for them, I can see why they'd be mad. A lot of years, it's hard to make money farming anyway. And then you have, you know, game to contend with. It can be pretty frustrating. Do you think that might be workable or would you oppose it no matter what?

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

TIMOTHY McCOY: I'm-- well, I'm-- I don't, I don't make independent decisions on the commission's opinion on a bill. You know, any changes, anything like that would, I would have to have a discussion with our board of commissioners and our director. I can't just fly by the seat of my-- I can't just make that call. I'm sorry.

MOSER: OK, thank you.

BOSTELMAN: Senator Groene.

GROENE: Thank you. In your defense, you're just hired to manage the game and balance it in the state of Nebraska. We made the comment earlier that the wild game belongs to the people of Nebraska. So if we have a-- come to Senator Erdman and you to a bill, then I'd vote for it. We, we appropriate \$50 million to Game and Parks. You got no problem paying people out, do you?

TIMOTHY McCOY: I--

GROENE: I mean, it isn't a closed system here. Right now, Game and Parks is pretty much self-funded, but--

TIMOTHY McCOY: Yeah, right. Well--

GROENE: Why would we charge the game hunter higher fees when the game belongs to the people of Nebraska. And there's an awful lot of people in Nebraska, is it not true, don't want to shoot any deer because they love nature. So bring it on, I'll vote for that appropriations. I'm sure Senator Stinner won't mind.

TIMOTHY McCOY: I know what they'd tell us if we requested it.

GROENE: Just in your defense, it's, it's up to us to appropriate, the people of Nebraska to appropriate the funds. Thank you.

BOSTELMAN: All right, thank you, Deputy Director McCoy, for your testimony. Next opponent to LB468. Good afternoon.

ALICIA HARDIN: Good afternoon, Senator Bostelman and the rest of the Natural Resources Committee. My name is Alicia Hardin, that's A-l-i-c-i-a H-a-r-d-i-n, and I'm the wildlife division administrator for the Nebraska Game and Parks Commission. As was already stated, the commission is opposed to LB468. And I'll be happy to answer some

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

questions, but I want to make just a few points, if you wouldn't mind first. Number one, this bill won't solve the damage issue as it's been discussed, but hunting can. And number two, the commission has been doing things to help mitigate wildlife damage. On the first point, hunting is the way to control our game animal populations and is consistent with the Nebraska Constitutional amendment XV-25, "Public hunting, fishing, and harvesting of wildlife shall be a preferred means of managing and controlling wildlife." But public hunting is dependent on a very important factor and it's been discussed here, and that's access, especially in a very privately-owned state like our state in Nebraska. We know where there is unlimited access to hunters there is not damage due to game animals. This is evident on our public lands across the state and those that are leased by us for access for public hunting. On the second point, the commission has stepped up our outreach to producers and we've listened to their concerns. We've gone and had public meetings. We've invited them to specific regional meetings to discuss the damage that they're having and to try to come to some solutions that will work for all parties involved. We've also done quantifiable surveys with our landowners for deer, antelope and elk to try to get a better handle on where they are on their damage concerns. We've sent out press releases and emails reminding producers to call us if they're having damage. We have proactively reached out to those producers that we've worked with in the past to try to see if they need any help at that time. Since 2014, the commission has increased antlerless deer tags by 73 percent and doe-fawn antelope tags by 444 percent and antlerless elk tags by 84 percent. We have reinstated the antlerless deer hunter database for landowners to connect them with hunters so they can get that antlerless harvest when they desire that. We are in the process of hiring two new biologists, one that will be in the southwest and one in the Panhandle. Their job will be specifically to work with our producers on wildlife damage issues. We want them to build those relationships with the landowners and work, work on proactive measures. We've increased our efforts to look at the population estimates of our big game species, most notably with elk. We know hunting can work. Last year alone we saw an 84 percent increase in our antlerless elk harvest and this was after a 43 percent increase in antlerless permits. This was attributed to a few different things. Number one, we did lengthen that antlerless elk season. It is a six-month season. It runs from August 1st through the end of January. In many of those units, we also split that antlerless season so we can really concentrate the hunters when the producers

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

needed them the most. And we've been actively working to match hunters with landowners. That's probably been one of our biggest successes that we've seen with antelope, elk and deer. When there are, when there are landowners that are having problems, we will help them find the hunters. In closing, we know this is a serious issue and we are taking it seriously, but we feel that through that cooperation with landowners and hunters, the damage issue can be solved and we are committed to being a part of that solution. Thank you.

BOSTELMAN: Thank you for your testimony. Are there questions?

HUGHES: Yes.

BOSTELMAN: Senator Hughes.

HUGHES: Thank you, Ms. Hardin, for coming in today, and I appreciate the job that you're trying to do, but quite frankly, the people that-- my constituents that have been on my case since day one seven years ago, they don't trust Game and Parks. You guys have not been responding to them, so they don't come to the meetings. And I'm not attacking you, but the, the challenge that we have is, you know, the landowners-- it's been mismanaged for too many years, so the trust is not there. And you're way behind the curve of trying to catch up because Mother Nature has been very good to the wildlife in the state of Nebraska. So, you know, you're, you're increasing your hunting and permits and trying to match up hunters and landowners in single digit, but you need to be double and triple-digit efforts because it is exploding that fast. So thank you for coming in today. But just, just keep after it. Just work harder, please.

ALICIA HARDIN: Yes, sir. And I really do feel like Senator Gragert's bill, LB395 would really help us with a lot of the tools that we could use in the field. And so I really encourage that particular bill.

BOSTELMAN: My question, I guess my comments or question will be same thing that talked to Deputy Director McCoy. And you know, Senator Erdman says, you know, what's going to happen in the spring? And quite frankly, I mean, there's nothing else that can be done other than the financial side of it. If you're going to eliminate animals, there's only one way to eliminate animals, and that's to go out and harvest animals, cull animals, cull whole herds. Nobody wants to see that, I don't think. However, it's kind of looking that way in some senses. So

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

I'm kind of curious as what you said, you're hiring-- there's two new biologists. So one thing Senator Erdman has said and Senator Hughes have both had is moving the headquarters to another place in the state. My, my question to you is, is, is there a greater need for in the biologist side of, of, of what you do personnel wise, whether it be biologists, whether it be law enforcement, whether it be whomever, that needs to be moved out west to actually work better, have more people out there to be able to respond. I mean, it's one thing to move the director out there, but it's another, another thing to move the workers out there. So has there been much thought about moving more, I'll say workers, or hiring more people out on that side of the state to address the issue?

ALICIA HARDIN: I mean, that's exactly what we were doing with these, these two biologists that we're, you know, funding out of other sources within our own-- within the game fund, within what we have to try to move more people out there and get boots on the ground to try to help them.

BOSTELMAN: I appreciate that. But let's two bio-- how many do you have total out there, biologists?

ALICIA HARDIN: We have about 60 biologists and more support staff.

BOSTELMAN: In the western part of the state?

ALICIA HARDIN: Not just in the western part of the state, but across the state in different districts.

BOSTELMAN: So I guess again, I guess my question is if we don't have enough biologists or Game and Parks personnel out west part so they can respond to the concerns of the landowners, then what's that number going to be and how can we, you know, is that something we need to be really looking at rather-- on this to try to help out?

ALICIA HARDIN: We would certainly appreciate any extra help in the field for biologists. And moving them, though, might take it away from the help that those other areas are receiving, so--

BOSTELMAN: Yeah, I wouldn't move them, I would just hire more.

ALICIA HARDIN: Hiring more.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: Would just hire more people.

ALICIA HARDIN: I don't think you're going to hear any complaints from our wildlife division. However, we would have to be fiscally responsible and make sure that we are, you know, continuing to manage all the things that we have to do as well.

BOSTELMAN: I understand that, but we have a \$117 million fiscal note.

ALICIA HARDIN: Yes.

BOSTELMAN: You know, what's a couple hundred thousand to hire, you know, a couple more--

ALICIA HARDIN: Right.

BOSTELMAN: --experts to put out in that area. So I appreciate you coming in. I appreciate your testimony. Any other questions? Seeing none, thank you very much.

ALICIA HARDIN: Thank you.

BOSTELMAN: Next opponent.

SCOTT SMATHERS: Thank you, Chairman Bostelman, members of the committee, my name is Scott Smathers, S-c-o-t-t S-m-a-t-h-e-r-s, I'm the executive director of the Nebraska Sportsmen's Foundation. And for the record, for the fifth time, we are not a lobbying firm. We are a private foundation funded through corporate sponsorship and partnership money. But I did learn something new that the ag community landowner producers don't have a lobbying body. I guess Corn Growers, Farm Bureau and Cattlemen are not lobbyists. With that said, I'm here today to represent also the 13,000 members of the sportsmen in the state, RAKS Big Game Supplement, Big Red Outdoors, Nebraska Deer and Game Expo as part of our partnership and who we work with on a regular basis. We're obviously here supposed to LB468. We've had this conversation for a long time. The results vary depending upon the areas and opinions and thoughts. Some believe the successes, some don't believe that work is being done. One thing I know that's apparent: more work is needed to be done. What's interesting is that Senator Hughes and I've had conversations for quite a while, and Senator Bostelman and I have been and Game and Parks. And I've taken a hard look over the last two years at other states. I know in Nebraska

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

we typically don't like to bring ex-- import other states' programs. However, I've looked at other states because quite frankly, the 290,000 of us that are registered in the state that spend \$800 million a year participating in our hobby through taxation, if you will, definitely want to find a solution to depredation. And it's a lot of things. But when you start to look at who's responsible, ag producers, and again, I manage a 1,250 acres strictly for hunting of my own property, and I'm working with my neighbors on a regular basis. So I looked at other states, looked at 10 states around us, five states that pay for damages. And I look at a ten thousand foot [INAUDIBLE] which explains that, because I can go into depth, which is 40 pages each for each state, if you will. Colorado, Wisconsin, Idaho, South Dakota, Wyoming, all pay for damages. The budgets range from one million to three and a half million dollars, paid through surcharges to sportsmen in various amounts from in-state, out-of-state permits, park permits, those type of areas. All five of those states require access to hunting in various forms to be eligible for payment and/or additional depredation, indoor, out-of-season kill permits. Access. Plus some require more in-depth mitigation plans year-round by the ag producers, i.e. stack fencing we've heard about. We've talked about food plots, South Dakota pays for food plots for elk, for away from crop production, and they budget that. [INAUDIBLE] the states that do not pay for crop damage: Iowa, Kansas, Michigan, Minnesota, North Dakota and Ohio, five total. So we have five and five. All five of those states require public access to be eligible to receive kill and/or additional depredation in-season or out-of-season permits to mitigate the issues. Some require extremely in-depth. In fact, one of those states require, it's 14 pages long what the landowner's responsibility is to mitigate the intersection of wildlife. Some require additional educational processes for hunters and all five-- and all ten actually require access to the land. So with that said, we have an opportunity here, we've been working on it. There's steps being made. Are they fast enough? That's each individual's, each individual's opinion at this point. Wildlife is going to continue to grow. One thing I will say is that it is ludicrous to say that Game and Parks introduced elk to the state. It's a wild animal that came across the borders because of wildlife issues in other areas and wildfires. They didn't break down a fence and let them in like they didn't let bears or anything else in. But that said, we have to find solutions. We're ready to come to the table. As far as sportsmen, Senator Hughes, there's 290,000 of us in a state. I'm sure I can find

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

20 to 30,000 between youth and adults that will do an out-of-season cull. In certainly areas-- we've done Fontenelle Forest. Eight, nine years ago we done, private organization brought in sharpshooters with bows and arrows for Fontenelle Forest to control theirs. We can find the people. I can guarantee, I can put a hands on right now 5,000 youth in western Nebraska through two different organizations that will gladly sit the tree stands. I don't need a landowner to show me where the elk are. I don't need a landowner to show my mentors where the elk or the deer or the antelope. Been doing this a long time, don't need them show me. Open the gate, I'll shut the gate, I'll stay out of your fences, that is what we'll do. We have the, we have the hunters. We have the sportsmen. Now, whether we go with [INAUDIBLE] LB395 starts to address some of these issues on a small scale that we can expand upon. Every region in the state has a different need, every landowner has a different need, every landowner has a different wish or complaint or, or, or compliment. So to cookie cutter this with this bill, without any mitigation from landowners, without any steps or statute plans, there's a zero opportunities to control what we're trying to control. With that, I'll close and answer your questions.

BOSTELMAN: Thank you, Mr. Smathers. Any questions? Seeing none, thank you for your testimony. Next opponent.

JERRY McDONALD: Hi, Senator Bostelman, committee members. My name is Jerry McDonald, J-e-r-r-y M-c-D-o-n-a-l-d. I am the eastern, or I guess, senior regional rep for eastern Nebraska. I have 30 chapters in Nebraska. I'm an employee of Pheasants Forever, I'm not a lobbyist. The leadership team in Nebraska Pheasants Forever decided this was an important enough bill for me to come here in person and patiently wait for about four hours to get in front of you. I shouldn't have showed up so early, I'm sorry about that. But anyway. Nebraska Pheasants Forever and Quail Forever consists of 62 local chapters in Nebraska and over 10,000 members just here in Nebraska. We have close to 140,000 members in the United States and 700 chapters. We also have biologist's was brought up. We also have 25 field biologists in Nebraska and those biologists work one on one with private landowners to assess wildlife conservation and economic opportunities. So I think that's important and a timely fact. But we respectfully oppose LB468. LB468 counteracts the efforts put forth by nonprofit grassroots volunteer groups like Pheasants Forever and other wildlife conservation groups. Pheasants Forever has worked to instill a sense of stewardship among private landowners that includes wildlife

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

habitat. Wildlife habitat may not take priority over farming and ranching practices, there are opportune-- practices, there are opportunities given to Nebraska private landowners to gain an economic return or to offset their losses. Strategically placed federal, state and local conservation programs do exist to create buffers, food plots, field borders and other options that ought to-- offer a proactive approach. Pheasants Forever is a leading organization in hunter recruitment, retainment and reactivation. Senator Hughes, you asked about is there enough hunters. Pheasants Forever feels we need more hunters. That's why we've got the R3 Initiative in the state and nationally also: recruitment, retainment, reactivation. Options exist for private landowners to offset the costs of damage by allowing hunting on their property. Youth who are introduced to the outdoors are more likely to participate in outdoor active-- activities as adults. We would like to see kids outside rather than inside playing video games. Now, more than ever, the future of conservation depends on our ability to offer positive hunting experiences. Access to hunting land is cited as one of the top reasons people stop hunting. It's important to have public access. Not to mention the funding for public access programs will be cut to pay these damages. There's only so much money in the budget. This is a lose-lose for conservation in our state. According to recent comprehensive research, we have seen a 53 percent loss of grassland birds since 1970. These are game and nongame birds. Fifty-three percent loss of grassland birds. This equates to three billion with a B, three billion birds lost on the landscape, habitat loss being the main driver. With strategic planning, precision agriculture, existing conservation programs and exploring hunting alternatives, wildlife damage issues can be resolved without spending more state and federal funds. Furthermore, the new opportunities bring more dollars into local communities as hunters stay in local hotels, fill up with fuel and eat at local restaurants. Unfortunately, LB468 does not solve any wildlife damage issues and further compounds the problem by deterring hunting when positive approaches already exist. For all these reasons, Nebraska Pheasants Forever respectfully opposes LB468. Thank you for your time.

BOSTELMAN: Thank you for your testimony. Any questions? Seeing none, thank you for your testimony today.

JERRY McDONALD: Thank you.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: Anyone else like to testify as an opponent on LB468? Seeing none, anyone would like to testify in the neutral capacity? Seeing none, Senator Erdman, when she's finished here, you're welcome to close. I will say, as you're sitting down, we do have one written testimony opponent from Katie Zulkoski, Ducks Unlimited. Position letters, opponents: Big Game Conservation Association, Congressional Sportsmen's Foundation, Eric Zach, Izaak Walton, Nebraska Bow Hunters, Nebraska Deer and Game Expo, Nebraska Wild Turkey, Sierra Club, Wildlife Society, Darryl-- Darryl Blackstone. Proponents: Gary Thayer, James Jelinek Farm, Jeff Metz, Lane Darnall, Mark Knaub, Robert Post, Spike Jordan and Terry Jessen. With that.

ERDMAN: Thank you. Thank you, Senator Bostelman. That was amazing. Pheasants Forever opposed the bill. It's a lose-lose situation for them. Did you hear him mention anything about the landowners? Did he say it's a lose-lose for the landowners? No. No, you didn't happen to hear that, so. Mr. Smathers also said that Game and Parks didn't introduce, reintroduce or introduce elk. Tell me where the elk went that were inside the enclosure of the Wildcat Hills? Where did they go? They were released. So then the question was, what is the number of elk, of animals we should have? And those producers that I've spoken with have said about 10 years ago, those numbers were about right. Ten years ago. So Mr. McCoy is so opposed to my bill. Anyone want to venture a guess when they contacted me to talk about the bill, trying to make a provision that would make it work? Senator Moser? Anybody want to guess? Never. And I've noticed today, which is the sixth or seventh time that we never seen the director come and testify. Mr. Douglas never shows up. Why is that? I don't know, you have to ask him, I guess. So the young lady testified that hunting is the preferred method to control a population. Remember preferred? They didn't say it is the only method, they said preferred. All right? So Director McCoy says, we just need some time. We need some time. We've given them 20 years. Twenty years. How much time do we need? I think 20 years is sufficient. How much more time are we going to give them? This bill is an opportunity for us to force them to make a decision that they should have made 20 years ago. No, now we're going to give them some more time, right? Now LB469 is an appropriations bill, \$10 million, and it's going to be distributed on a pro rata basis. OK? The fiscal note will be \$10 million distributed on a pro rata basis. Whatever your damages are, if there's \$10 million, you get all of it. If it was only, if there's \$20 million in damage, you get 50 percent

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

pro rata basis. That's what the bill says. Now, have they ever got together with the landowners and talked about it? Let me tell you something, Mr. Schuler, when he sent his letter to Game and Parks back in, in September and December, he listed seven or eight opportunities that Game and Parks could use to control population. Have they ever spoken to me about that and said, hey, what do you think? Can we get together and talk about this? Can we get the hunters? Can we get the landowners? Can Game and Parks get together? He listed ways that you can control this population. Multiple methods of population control can be initiated, decide a reasonable goal of the elk population and attain it quickly to prevent further damage. First of all, we got to figure out how many there is. There is no way on God's green earth there's 3,500. No way. But they don't care. And if you can't measure something, you can't manage it. Targeted control areas he talked about. Senator-- or Mr. Schuler said that some places need more control, some don't. Depredation requests, they need to be acted upon. He lists, he lists all these areas that they could do. He suggested that. Have they done that? No, no. We're going to hire more biologists. Oh, yeah, but we can't pay for damages. Remember what the Constitution said? Doesn't make any difference. So let me read you a little bit of senator-- of Mr. Schuler's comments that he sent to me. I think it's very important. He says, my family was grateful for the swift and a proper response last year when it gave me the depredation permits. Again this fall in 2020, I, I requested depredation permits for damages that occurred when 100 elk moved into my cornfields. Both requests communicated-- I requested verbally and to the, the Game and Parks staff, my requests were either ignored or denied despite the success of previous year and the overwhelming evidence of existing potent-- potential future damages. Our losses attributed to the crop loss and subsequent necessary care of our livestock exceeded \$130,000 in 2020. Most of that loss could have been prevented with the approval of depredation permits. Why did they not give him depredation permits in '20? It's because they got all kinds of heat from people like Scott Smathers in '19. All right? He goes on to say, the Nebraska Game and Parks decision to deny my request was reportedly influenced by the response from the hunters. I viewed several responses after authorization of the depredation permits conveyed with social media. Numerous falsities were posted, including how we created a problem by denying access to hunters, charging exorbitant hunting fees, sold illegal hunts using depredation permits, collected crop insurance on the damage, et cetera. In voicing his opposition to private landowners

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

protecting their property from concentrated wildlife populations, now listen to this, Mr. Scott Smathers report-- representing the Nebraska Sportsmen's Foundation falsely testified to the Natural Resources Committee in February 2020, claiming eight bulls and no cows were killed during the depredation action and stated there's going to be 30 or 40 animals harvested and dumped in the drainage ditch if LB1173 passes. You hear that? Hopefully, the state Legislature and the Nebraska Game and Parks can be influenced by evidence and science and not totally on the votes of opposition based, based on lies and fear mongering. We have a problem. We've given them enough time. So what I'm going to ask the committee is this. Don't advance-- if you don't advance the bill, then I want you to tell me the next time those people call with problems, what should my answer be? How should I respond to them? We don't care? We don't believe you? Sit down and shut up? What am I supposed to say to them? This is a chance for us, the Legislature, to get control of an agency that's was poorly managed as any agency of the state, and I don't believe that's a far-fetched statement. If you look at 20 years of mismanagement, and Senator Hughes is exactly right, we're so far behind the eight ball, there's no catching up. And Senator Bostelman, you're right, we got to shoot something. Whatever it be. But we've got to worry about the hunters, we've got to worry about the Pheasants Forever. But no one's talking about worrying about the landowners, about what they pay. That's why I'm here. I'm asking you to do the right thing, force this, this agency to make decisions that make a difference, make a difference once and for all. Because Senator Hughes nailed it, right? They have no, they have no respect in the landowners' eyes. We've called them. They come out, they don't do nothing. And that fiscal note talked about the damage from mountain lions. It was a joke, \$674 a year. So with that, I'll close and I ask you to forward this bill to the floor and we'll get the appropriations bill approved and we'll commit \$10 million to this. And they can stop paying the \$10 million as soon as they solve the problem. Thank you.

BOSTELMAN: Thank you, Senator Erdman. Senator Hughes.

HUGHES: Thank you, Chairman Bostelman. Senator Erdman, I want to apologize to you for having to be called away during your opening. But I, I agree with you, hunting is the preferred method to control this. And the answer that I would encourage you to give is the answer that I'm going to give all of those calls from now on. It's the 3S, you

Transcript Prepared by Clerk of the Legislature Transcribers Office
Natural Resources Committee February 11, 2021
Rough Draft

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

know? We in western Nebraska don't look to government to solve our problems.

ERDMAN: Correct.

HUGHES: And the Game and Parks mismanagement has proven for over 30 years that they can't handle the job. So, you know, the 3S method is going to be my question-- my answer to those individuals. And I'm certainly going to encourage them to do that because clearly the state agency charged with managing wildlife, especially big game, isn't up to the task. Well, thank you for bringing this bill.

ERDMAN: I appreciate it. Thank you.

BOSTELMAN: Seeing no other questions, that will close the hearing on LB468.

ERDMAN: Thank you.

BOSTELMAN: Thank you, Senator Erdman.

MOSER: Well, we have a few minutes for the room to exchange testifiers here. We'll start in just a couple of minutes.

[BREAK]

MOSER: OK, we'll call to order our hearing for this afternoon. For the safety of our committee members, staff pages and the public. We ask that those attending our hearings abide by the following procedures. Due to social distancing requirements seating in the room is limited. We ask that you only enter the hearing room when it is necessary for you to attend the bill hearing in progress. The bills will be taken up in the order posted outside of the hearing room. The list will be updated after each hearing to identify which bill is currently being heard. The committee will pause between each bill to allow time for public to move in and out of the hearing room. We request that everyone utilize the identified entrance and exit doors to the hearing room. We request that you wear a face covering while in the hearing room. Testifiers may remove their face covering during testimony to assist committee members and transcribers in clearly hearing and understanding the testimony. Pages will sanitize the front table and chair between testifiers. Public hearings for which attendance reaches seating capacity or near capacity will require the entrance door to be

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

monitored by the Sergeant at Arms who allow people to enter the hearing room based on seating availability. Persons waiting to enter a hearing room are asked to observe social distancing and wear a face mask covering while waiting in the hallway or outside the building. The Legislature does not have the availability due to the HVAC project of an overflow hearing room for hearings which attract many testifiers and observers. For hearings with large attendance, we request only testifiers enter the hearing room. We ask that you limit or eliminate handouts. Welcome to the Natural Resources Committee. I'm Senator Mike Moser from Columbus, I represent the 22nd Legislative District. I'm the Vice Chairman of this committee. The committee will take up bills in the order posted. Our hearing today is your public part of the legislative process. This is your opportunity to express your position on the proposed legislation before us today. The committee members might come and go during the hearing. This is just part of the process, as we have bills to introduce in other committees. I ask that you abide by the following procedures to better facilitate today's proceedings. Please silence or turn off your cell phones. Introducers will make initial statements followed by proponents, opponents and then neutral testimony. Closing remarks are reserved for the introducing senator only. If you're planning to testify, please pick up a green sheet on the table at the back of the room. Fill out the green sheet before you testify. Please print and please complete the form in its entirety. When it is your turn to testify, give the sign-in sheet to a page or the committee clerk. This will help make a more accurate public record. If you do not wish to testify today, but would like to record your name as being present at the hearing, there's a separate white sheet on the tables that you can sign for that purpose. This will be part of the official record of the hearing. When you come to testify, please speak clearly into the microphone. You may remove your mask, tell us your name and please spell your first and last name to ensure that we get an accurate record. We will be using the light system for all testifiers. You will have three minutes to make your initial remarks to the committee. When you see the yellow light come on, that means you have one minute remaining. The red light indicates that your time has ended. Questions come-- may come from the committee following that. Those are not included in the three minutes. No displays of support or opposition to a bill, vocal or otherwise, is allowed at the public hearing. Committee members with us today will introduce themselves starting on my left.

Transcript Prepared by Clerk of the Legislature Transcribers Office
Natural Resources Committee February 11, 2021
Rough Draft

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

GRAGERT: Good afternoon. Tim Gragert from northeast Nebraska, District 40.

HUGHES: Dan Hughes, District 44, 10 counties in southwest Nebraska.

AGUILAR: Ray Aguilar, District 35, Grand Island and Hall County.

J. CAVANAUGH: John Cavanaugh, District 9, midtown Omaha.

MOSER: And Senator Bostelman will be back momentarily. I'm just getting things kicked off here so we can keep things moving along as best we can. OK, first up on the agenda, we have a nomination hearing, correct? Let's see-- did I introduce the clerk and the-- did I miss that? I did. To the left of the committee is the committee legal counsel, Cyndi Lamm. To my far right is the committee clerk, Katie Bohlmeier. Our pages this afternoon are Noa and Savana. Is that correct? OK, all right. Thank you. The first part of the hearing is the hearing for Kendall Curry, who's been nominated to serve on the Game and Parks Commission. So if you could give us a little opening talking about your interests and your resume, we'd appreciate it.

KEN CURRY: Very good. And Senator Moser, members of the committee, my name is Ken Curry, K-e-n C-u-r-r-y. First name is Kendall, K-e-n-d-a-l-l. It's an honor to be here. I look forward to the conversation. In the spirit of time, how much time would you like me to cover? I could talk for a half hour, I could talk for five minutes. You've got a busy day--

MOSER: A couple minutes would be plenty, thank you.

KEN CURRY: Perfect.

MOSER: We love you, but in--

KEN CURRY: Yeah, love you too.

MOSER: --the interest of getting done by dark.

KEN CURRY: Overall, born Nebraskan, parents are Nebraskans. They were farm kids, Depression era. Dad was a World War II guy. I grew up born in Scottsbluff. Spent first grade in O'Neill, second grade through college here in Lincoln. Graduated with distinction, mechanical engineering. Later in life, the MBA, high distinction. I've worked in

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

numerous, numerous certifications around professional engineering. From a, from a process perspective, I'm a certified lean leader, Six Sigma Black Belt, which I believe from a Game and Parks perspective, looking at how we do things and how we improve is very important. I've, I've supported our organization, and I'll share where I'm at too, with strategy, strategic planning, strategy, maps, alignment. My current role, I'm vice president of customer services, chief customer officer for the Nebraska Public Power District. Been in consulting, been in manufacturing and in engineering sales from a technical perspective. But the vast majority of my career has been leadership roles. Currently, I support our customers, and I'll bring the focus of the customer to that in the game-- Game and Parks role. I've also supported our human resources area, safety area, continuous improvement areas, was in the nuclear engineering area, energy efficiency, a lot of different roles. From a community perspective-- perspective, I don't sit well. I've, I've been on our habitat board, I've been on United Way board, currently the chamber of commerce board chair. I've been on the chamber of commerce board for four years. I was on the Columbus Public School board for over ten years. So I believe in community and I believe in participating. So my commitment to you is in this role, I'll play, I will learn, I will engage. Some of the aspects that I think really fit, from what little I heard before, we have opportunities for communication. We have opportunities for collaboration, understanding who customers and stakeholders are, and trying to find common resolutions and common ground. I also, in pure openness, I have not been oriented, so I'm disoriented. Yes, I have my orientation in March. So I, what I can talk to you about is how I would approach things. I do not know the issues, I don't know the staff very well. I know like two of them, barely. How I got to this, the interest. About two years ago, a good friend of mine who is an avid duck hunter, he and I talked. And one thing he said, because I talked about when I retire some day, I got to retire to something and be engaged and I'm not ready to retire yet, but. He said you should be on the Game and Parks Commission. And so I started looking on the Internet and then I saw Jim Ernst was our local guy. I contacted Jim, learned some things from Jim. I got to know Dan Kreitman, reached out to Dan, learned from Dan. And actually Jim had said he had about a five-year window. I said, perfect. That's great. I've got a lot, a lot of time to learn. So when that opening comes up, I would love to be the guy. And well, and he said it's going to be a year. because he wasn't going to re-up for four. So I learned the best I could. I, I

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

came down to visit with the Governor's chief of staff to learn the process, privileged that the Governor has, has requested the appointment for me. My commitment to you like, like I said. Another thing, I mentioned the Eagle Scout. I'm an Eagle Scout, proud father of two Eagle Scouts, been around that program forever. My commitment is honesty, integrity, openness. I'll engage and play and play well. So thank you, and I'd be happy to talk about anything you all would like to talk about.

MOSER: Yes. Mr. Curry is from my district and I know him well, and that had nothing to do with getting nominated by the Governor. You know, he earned that on his own. Questions?

HUGHES: Yes. Thank you, Mr. Curry, for your willingness to serve the state of Nebraska. So and please don't take this personally--

MOSER: OK.

HUGHES: You and I have never met. I do have a problem with the agency which you want to be part of. So when you, you mentioned your goal is to serve the customers. Who are the customers to you?

KEN CURRY: Well, and again, what I know right now, it's a combination. It's the public, it's the citizens. There's the game and the parks, and I would assume there are different customers of each. There are landowners that are adjacent to because of the game aspects, I understand that is a very contentious discussion and I overheard parts of it. I think all of the above are the customers. The ultimate customer, I believe, is-- are the citizens and the resource that this agency is to manage, the wildlife, the resources.

HUGHES: OK, well, I'm glad that at least here you mention landowners.

KEN CURRY: Yes.

HUGHES: I, I don't know how much of you-- the exchange you heard earlier, but I have a seven-year running battle with Game and Parks that have been stonewalled. So I am not a happy camper when it comes to Game and Parks.

KEN CURRY: I would be one of nine members, but I would love to have the conversation.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

HUGHES: I understand that. That being said, I wish you good luck.

KEN CURRY: Thank you.

HUGHES: But and I forgot to tell Senator Erdman this, but you and Mr. Brandt are up for appointment to Game of Parks. Don't order the letterhead yet, it could be a rocky road. Thank you for your willingness to serve.

KEN CURRY: I would like to understand why, but that's OK.

HUGHES: I would love to come and sit down--

KEN CURRY: Yes.

HUGHES: --across the desk.

KEN CURRY: With all due respect, I think the background I would bring in the honesty, integrity, the hard work, the balanced approach, the reaching out to understand, find common ground, I think all of that should be what a commissioner should bring so.

HUGHES: Very good.

KEN CURRY: Very good.

MOSER: Other questions? Senator Cavanaugh.

J. CAVANAUGH: Thank you, Vice Chairman Moser. And thank you, Mr. Curry, for being here and for your willingness to serve. And it's a nice segue to the question I wanted to ask, and I appreciate you answered basically all the questions that I was going to ask in your opening. So I appreciate that. We have a bill that came before us about making the Game and Parks commissioners elected.

KEN CURRY: OK.

J. CAVANAUGH: If that were something that would happen, would you continue to pursue this position or were you, were you more interested in it because it was an appointed position?

KEN CURRY: You know, going back two years ago, I didn't know how it was. So I learned, I had learned the process and I would, I would

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

assume I would pursue it as elected. And with there's benefits and drawbacks of each. Yes.

J. CAVANAUGH: And that would be true. Thank you.

KEN CURRY: You're welcome.

MOSER: OK, other questions? Thank you, Mr. Curry. Appreciate your willingness--

KEN CURRY: Thank you all for your service and for the conversation.

MOSER: --to serve. Yeah, go ahead and have a seat. Is anyone here to speak in favor of Mr. Curry's nomination? Anyone here to speak as a proponent? OK, is there anyone here to speak as an opponent? Seeing none, is there anybody here to speak in a neutral capacity? OK, thank you, that will close our hearing. That brings us to our first bill on the docket for this afternoon, which should be LB483. Does it matter when we read the opponent and proponent letters?

_____: It's after, usually, after all the testifiers.

MOSER: After all the in-person testifiers have come? Go ahead, Senator.

J. CAVANAUGH: Thank you, Vice Chairman Moser. And thank you, Natural Resources Committee. I particularly appreciate everybody's attention today. I understand how long of day it has already been. My name is John Cavanaugh, J-o-h-n C-a-v-a-n-a-u-g-h, I represent the 9th Legislative District in midtown Omaha. I'm here today introducing LB483, which would direct the University of Nebraska to develop an evidence-based, data-driven strategic action plan to provide methods for adapting to and mitigating the impacts of extreme weather events on climate change-- or climate change. LB483 is a continuation of the efforts from the legislative study in 2016, which unanimously recommended the state create a climate action plan. The handouts I'm handing out kind of go to the demonstrate-- or just one example in particular of the continuous increase in temperature. The weather is changing. The average temperature has steadily increased over the last 50 years. You can call it what you want, climate change or global warming or something like that, the impacts of climate change to our state must be addressed. We heard Senator Flood actually say this morning: There's no debate. Climate change is impacting the economy of

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

the United States. Extreme droughts or floods-- that's the end of the quote, but extreme droughts and flooding can take a substantial toll on our farmers, our ranchers. The climate action plan is a necessary step for our state to confront climate change-- the changing climate head-on. I handed out a 2014 study from the University of Nebraska that projects an increase in the average temperature between four and-- four to five and eight to nine, eight degrees Fahrenheit by the end of the century. The broad consensus of scientists experts conclude that climate change is real and as a result of human activity. The purpose of the climate action plan is not to relitigate past studies or provide another study to be brandished or ignored by opposite sides. The purpose is to provide a real roadmap for state policymakers for the actions we should take in order to mitigate and deal with the effects of climate change. The action plan will require a baseline measurement of greenhouse gas emissions or the state's carbon footprint; measurable benchmarks and goals and actions needed to meet those goals, but will not mandate any specific action; assessments or risks vulnerabilities from the negative impacts of climate change; opportunities presented by strategies for adapt-- adaptation and mitigation of the impacts of climate change; opportunities for improvement in increasing, increased resilience to the impacts of climate change; potential economic impacts of climate change both positive and negative; an examination of impacts of climate change upon the following sectors: agriculture, water resources, health care and public health, energy generation and use, ecosystems, for-- forestry, rural and urban communities, transportation, commerce and industry; and make recommendations for new policies and changes, changes to policies and programs based on the information and data collected, including funding needed and recommended legislation. The process will include public engagement, input from entomologists, climate-- climate scientists, water, agriculture and natural resource experts, an examination of comparable strategy action-- strategic action plans from other states. I'm very passionate about conservation and the environment. I believe that climate change represents an imminent threat to our way of life. But while passion has its place, it is no substitute for empirical evidence and data-driven, data-driven approach. This-- and that's what this action plan calls for, is data. I want to, I want to thank the committee for the time, and I'd be happy to take any questions. And I just wanted to point and the thought about, I think what Mr. Smathers said. Think about all the different ways that the changes in weather are affecting our economy.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

And it's hard to kind of get-- pull those together. But one of the things that Mr. Smathers said in the previous hearing was that we have this increase in elk population and he said it's because of wildfires in the mountain states, basically Colorado and Wyoming, I think, driving the elk population to Nebraska. We just spent two hours trying to figure out how to deal with that growing population and explain it. One of the explanations for that problem is the changes in weather as a result of climate change. So with that, I'd take any questions.

MOSER: Questions for Senator Cavanaugh? Thank you very much. You're going to stay for closing?

J. CAVANAUGH: I will be here.

MOSER: Yeah, OK, thanks. OK. Earlier, Senator Bostelman, Bostelman and I discussed the-- how long he wanted to allow each testifier to testify, and we felt that three minutes might be appropriate. But there don't appear to be any other testifiers in the hall, and so I think we'll go with four minutes to give you a little bit more time to present your case. And then you can respond to questions after that. So we'll go with four minutes per testifier. Thank you. Welcome.

AL DAVIS: Good afternoon, Senator Moser. I know you guys have had a long day, I'll try to be quick.

MOSER: Yeah, it's been a long day.

AL DAVIS: My name is Al Davis, A-l D-a-v-i-s, I'm testifying here today as the registered lobbyist for the 3,000 members of the Nebraska chapter of the Sierra Club. And we want to thank Senator Cavanaugh for introducing LB483, which directs the University of Nebraska to update the 2013 climate change study conducted at UNL and to develop an action plan. None of you were here in 2013 when the study referenced in the bill was performed. I was. The study bill, as initially proposed, instructed UNL to conduct a study on climate change. But that bill was modified when senators amended it and struck language referring to man's influence on climate. UNL then opted to conduct its own study without state funding. The results of that study were presented to the public in Innovation Campus, and the results were disturbing and grim. Many of the things presented in the 2013 study have already come to pass. In 2015, a task force of senators senate-- led by Senator Larson and Senator Ken Haar proposed a climate action

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

plan. Several members of that task force are still in the body today from both sides of the aisle. After that LR was completed, the group voted seven to nothing to implement an action plan. With the departure of several senators in 2016 due to term limits, the action plan has never been developed. It's long past time that this step is accomplished. But first, the 2013 study must be updated to reflect new information. Many people seem to forget that concerns about climate change were once bipartisan solutions were proposed decades ago. The EPA issued a detailed report called The Potential Effects of Climate-- Global Climate Change on the United States. Over 30 years ago, at the end of the Reagan administration, there were serious discussions about how to mitigate some of the damages during the Clinton administration, when the first discussion of cap and trade began to take place. One of the most striking predictions, which came out of the UNL study in 2013 was a projection that by 2075, North Platte, Nebraska, would have a climate similar to Lubbock, Texas today. Lubbock is 600 miles south of North Platte. Nebraska's Sandhills represent one-fourth of the land area of the state of Nebraska and are extremely fragile, and it is unlikely that the prairie grasses which survive and thrive there could remain viable with the sustained heat and hot nights typical of Texas weather. I don't need to tell you what hundreds of miles of free-moving sand would do to the remainder of the state and the thousands of Nebraskans who make their living on the land. Natural disasters, economic dislocations and the collapse of the economy in the state of Nebraska are all realistic expectations if we do nothing. If something seems-- it sometimes seems that we are like the frog in the pan of water. As it slowly warms, the frog remains oblivious until it's too late. The bill provides an excellent framework upon which to build both a study and an action plan for the future. An investment of \$250,000 to perform the study is extremely reasonable and a worthwhile investment of the state's dollars. Senator, I urge-- Senators, I urge you to move this part of the-- this bill on the floor very quickly. And thank you.

MOSER: OK, thank you. Questions for the testifier? OK, thank you very much.

AL DAVIS: Thank you.

MOSER: Appreciate you appearing today.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

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 Nebraska Farmers Union. We were very much a part of the efforts to move the study forward in 2013. That bill originally went through the Ag Committee. And it went to the Ag Committee because ag was such a heavy part of the whole consideration. And so at the end of the day, ag is going to, for better or worse, we're going to live with the actual consequences of changing weather patterns. And what we argued then is what we argue now, is that we need all of the information we can get in order for us to better understand what's going on so that we can respond accordingly. And so that effort in 2013 received national praise from a lot of folks saying that was one of the best, most appropriate, most useful studies, which really was a study of all the studies and then aggregating the data and saying, here's the likelihood of where we're at, where we're going, what we're facing, so that we can respond accordingly. So now we're to the responding accordingly part. We need to update those studies. But all of the things that those studies said in, in those reports have been coming true. So it's not like the studies were wrong. Everything so far seems to be running a little ahead of schedule. We're moving faster than we thought. So it's appropriate that we update the studies, but we also then focus on what is it that we can do to respond in an appropriate kind of way. So on the ag, that means a lot of things. It means being able to figure out how we deal with crops that use less water, how it is that we build healthier soil, so we have soils that can absorb more of the water when we get those big eight to 10-inch rains that sometimes show up. So that we can absorb more of that moisture, we could store it so that when we get the protracted gaps between rainfall events, we have more water-holding capacity in our soils. So we have more water in reserve to feed our crops. And the University of Nebraska is particularly well-suited for this effort. We have a world-class university. We are the nation's leader. Our university put together the National Drought Mitigation Center and system. And so when we look at the national maps to see where we're at relative to drought, we're using the University of Nebraska's driven system. And so they also put together the International Drought Mitigation Center. And so they are perceived, rightly so, as the national expert and leader in this area. We have a lot of expertise, we ought to give them the opportunity to use that expertise to help us put together a plan so that we can minimize the adverse impacts, but also take advantage of the opportunities that

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

also come with it. And with that, I'd be glad to end my testimony and answer any questions if I could.

MOSER: Are there any questions for Mr. Hansen? OK, thank you very much. Appreciate you attending the hearing today.

JOHN HANSEN: You bet. Thank you.

MOSER: And your patience waiting for us to get around to it. OK. All right, is there another testifier in support? A proponent?

KEN WINSTON: Good afternoon, Mr. Chairman and members of the committee. My name is Ken Winston, K-e-n W-i-n-s-t-o-n, I'm appearing today on behalf of the Nebraska Interfaith Power and Light. We believe that it's, it's vital for the state to put together a plan to address both the causes and impacts of climate change as soon as possible. Here are some of the reasons that we support LB483, and would encourage the Legislature to support it, support it as well. As Mr. Hansen indicated, there are many resources at the University of Nebraska that can be utilized to help put together this plan. And this plan can help the people of the state adapt to the impacts and mitigate the causes of climate change. The plan can also be used to guide actions to prepare for severe weather events, such as floods, drought and heat waves. It can also provide guidance, as Mr. Hansen indicated, to enable agriculture, which I'm sure all of you are aware is, is Nebraska's number one industry, to thrive and be profitable as a result of our changing climate, including investments in healthy soils and regenerative agriculture as supported by the Healthy Soils Task Force created by Senator Gragert's LB243. The plan would not be a mandate, but rather a roadmap to help individuals, businesses and local governments negotiate the challenges ahead. Now, let me talk just a little bit about Nebraska Interfaith Power and Light and why we support this bill. We're an interfaith, nondenominational, nonpartisan organization, and our purpose is to provide moral and spiritual messages about issues related to taking care of God's creation and addressing issues like climate change. We believe that climate change is the most important moral issue of the 21st century because of the fact that it has the potential of impacting every person on the planet, and the most severe impacts will be felt by the poorest among us. And to quote Jesus, We have an obligation to take care of the least of these. There are many faith and spiritual traditions which support action on climate change, including the Catholic Church. I'm

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

sure you're aware of the fact that Pope Francis issued an encyclical called Laudato si', which specifically addresses the issues of climate change and taking care of the planet. It also includes Southern Baptists and Evan-- Evangelical Lutheran Church, the Episcopal Church, Presbyterian Church, Quakers, United Church of Christ, United Methodist Church, as well as Jewish, Muslim and Native American faith leaders. Now, there's a number of reasons why we are specifically interested in this, particularly because of its impact on low-income and vulnerable populations. Many low-income and vulnerable people, they tend to-- they're more likely to live in flood plains, which puts them more at risk when there's flood situations such as when more severe floods happen, they're more likely to live in substandard housing, which creates more risk from heat waves and cold spells. They're more likely to have food insecurity, which increases during times of drought. The climate action plan can help both policymakers and people that provide services for these people respond appropriately to the vulnerable members of our community. Thank you. I'd be glad to answer your questions.

BOSTELMAN: Thank you for your testimony. Are there any questions from committee members? Seeing none, thank you for coming today.

KEN WINSTON: Thank you.

BOSTELMAN: Thank you for your testimony. Next proponent, please, for help LB483. Welcome.

JESSE STARITA: Thank you. Good afternoon, members of the committee, and thank you for your public service to Nebraska. My name is Jesse Starita, J-e-s-s-e S-t-a-r-i-t-a, and I'm here today just representing myself, citizen of the state. I also wanted to thank Senator Cavanaugh for reintroducing this bill. I think it's a very important piece of legislation, and I will express why. During the holiday break, I had the chance to take my two-year-old daughter to our wonderful state museum, a.k.a. Morrill Hall. And as we walked through the front doors and into the lobby, it often felt like we left one ice age to enter another. Those were cold days. As I wandered the halls looking at extinct dinosaurs and mammoths, I found myself reflecting a little bit on our human existence. While we may not personally experience or feel it day to day, we are already down a dangerous path of rising temperatures and climate extremes. In their era, these creatures eventually confronted their own demise, and they did so in ways we, if

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

we are wise, will not repeat. We all know a mastodon could not fly in an airplane or build megacities, could not comprehend the environmental impact of such actions, and of course, was clueless on how to actually address those actions. But we do and we can. This bill is not proposing to regulate an industry or a way of life, the way that I interpret the bill. In fact, the word regulation itself doesn't appear. It's not in the bill, not once. You know what word appears six times: opportunities. Are there risks in a changing climate? Hell, yes, I think we all know that, those of us who really focus on this issue. Yet there are so many opportunities in agriculture, water, energy, public health, transportation, ecosystems and industry, and they should be studied so we can best take advantage of them. In essence, this bill delivers informed choices to our state senators on how to respond to a crisis. If that's not part of good governance, then I don't know what is. I ask you to advance LB483 out of this committee and I thank you for allowing us to provide input.

BOSTELMAN: Thank you for your testimony. Do we have any questions from committee members? Seeing none, thank you for your testimony. Next proponent, please. Is there anyone would like to testify in support of LB483. Seeing none, anyone like to testify in opposition to LB483. Good afternoon.

MARK WHITEHEAD: Good afternoon, Senator Bostelman, rest of the members of the committee. For the record, my name is Mark Whitehead, that's M-a-r-k, last name W-h-i-t-e-h-e-a-d, I'm representing the Nebraska Petroleum Marketers and Convenience Store Association, it's our state association as part of a national organization of relating to petroleum marketers. In this particular case, I'm here to testify as a group of tank owners. First of all, I will state that of all the proponents that testified before us today, we have not-- we do not offer an opinion one way or the other on anything that they had indicated. I am not here to debate one way or the other on the advocacy of climate change or whether or not a study ought to be done or what exactly that might look like. Our position is the funding mechanism. Right now, it's proposed to come out of the leaking underground storage tank fund, Title 200. And in order to understand our opposition, I'm going to give a very brief history of that fund and a little bit of the structure of it. I've been in the industry for an awfully long time. Prior to the early 80s, there really weren't any regulations on underground storage tanks. Through the mid 80s, EPA kicked into gear and offered regulations immediately, even though

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

technology hadn't kept pace with the desire to clean up contamination from leaking underground storage tanks. By the late 80s, it was an entirely unmanageable issue. The industry tank owners could not survive moving past the late 80s. State funds-- or states across the country stepped in with funds very similar to Title 200. It is a measure of the industry, in this case, the industry is the owners of underground storage tanks, taking care of issues associated with underground storage tanks, entirely self-funded by the industry. And, and the sole purpose for Title 200, sole purpose of the funding and everything that goes into it is to take care of the industry's issues and problems as it relates to leaking underground storage tanks. The Department of Environmental Quality, now, I guess Energy and Environment, has taken a very stern approach to the protection of Title 200, because they too realize the importance of the integrity of, of that fund. So to do otherwise and to basically to take money out of that fund, which is the industry taking care of the industry's problems, would be a huge, huge mistake. We are, again, to start with the way I opened, we do not offer an opinion on the, the merits of climate change involvement by the University of Nebraska. Our particular issue is the funding mechanism, and it should either be a broader based or one that isn't specifically there done by the energy industry. One thing that might help is-- light is getting ready to turn this. The energy industry does not create demand, it meets demand. So to the extent that somebody would offer that, well, the industry is responsible for climate change. It is not responsible for climate change. We offer the products that we offer because people drive vehicles, and we do it and it's safest and most environmentally responsible way possible. Be glad to answer any questions.

BOSTELMAN: Thank you for your testimony. Any questions? Senator Hughes.

HUGHES: Thank you, Senator Bostelman. Thank you, Mr. Whitehead, for coming in today. I appreciate your background and knowledge and the petroleum industry. I agree with you that this is not a fund that should be raided for a plan or a study. In the past, the university seemed to find the funds to do the study, as previously noted by one of the testifiers. So I think that would be a good option this time as well. I guess the question I have for you, it seemed like it hasn't been too long ago that we just renewed the sunset date on the, on the last fund. Can you, can you remind me when that happened?

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

MARK WHITEHEAD: It was just a year or two ago. And it, and that's something within our, our own debate within our own industry as to when exactly to sunset that. Currently right now it's an active fund and the, the Department of Energy and Environment is doing a good job of managing it. Quite frankly, personally, I would just as soon seek private funding because they're a penny a gallon for the amount of gallons that my business done. I think we can find other sources out there. The question becomes, in my opinion, again, and this is our association's opinion, is how to segue way between the state fund and private funding. Because you do not want to, if, if I am insuring my own tanks, I do not want to pay into that fund because basically that is my insurance premium that's going. The underground storage tank fees and the per gallon fees are paying gasoline and diesel is basically my insurance premiums. And to sunset one without the other is, is the balancing act. And I think we will get there and the solution will become clear. But the sense of urgency on that has not been as great until that becomes a reality, principally because, as I stated earlier, this is the industry taking care of the industry's problems. This is not a taxpayer's issue. These are, those, those fees are paid by the, by the tank owners and the people selling the fuel through those tanks.

HUGHES: Do you, do you have any idea what kind of the average age of underground tanks are in the state of Nebraska? I know you've done a lot of upgrades in your facilities and across the state, so I'm assuming you would be a better, have a better feel for this, that the average age of the underground storage tank is probably not that old.

MARK WHITEHEAD: I had mentioned, way back in the history, the EPA solved that issue by doing a 10-year phase-in of tanks meeting the new regulations, would be the cathartically protected tanks or fiberglass, and gave the industry a 10-year period. That was through the 90s and basically sunset in '98 or had to, everything and be completed by '98. Frankly, at that particular point, not a great deal was done over a decade on underground storage tank regulations. Now that it's ironically they're becoming underground storage tank issues due to incredibly low sulfur diesel, as well as high levels of ethanol. So the industry has realized that, again, there are concerns that need to be met with the underground storage tank systems. And currently right now, the state and-- the states are responsible for implementing those new regulations, and Nebraska is in the process of implementing that right now as we speak.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

HUGHES: OK, very good. Thank you for coming in today.

MARK WHITEHEAD: Yout bet.

BOSTELMAN: Senator Moser.

MOSER: Are you familiar with the potential liabilities and a number of projects that are out there yet? As I recall, we had this discussion, I don't know if it was two years ago, but in that discussion, I recall that there were quite a few projects out there that are not, have not been remediated. And so that at that time there were enough potential projects that would completely wipe out your balance.

MARK WHITEHEAD: Correct. It's an interesting thing happened when it went from the liability switched from insurance companies to the state of Nebraska. They-- a few years after that happened, they realized there was not an unlimited amount of funds, especially as it related to underground storage tank problems. So they instituted a system called RBCA, which is risk-based assessment, and that was implemented in like '94, '95, someplace in there. So what that did, in essence, is those issues and those releases that climbed the highest, excuse me, the highest priority level were dealt with first. Those that were not a threat to drinking water supplies or potential drinking water supplies, either one, were put a little bit lower on the priority scale. And then as funds became available, as funds became available then those rose to the top of the priority list. An interesting thing happened as a, as a matter of that is that some of these sites were delayed by up to 10 years. And by the time they rose back to the top of the priority list, existing conditions within the site in terms of bacteria and that sort of thing, self-remediated the issue to begin with. And so in our case, in Whitehead Oil Company's case, we currently don't have any active sites, even though our organization has been around since 1959 and we inherited some old, old locations even prior to that. So it's, as the, as the-- again as RBCA sites come on, then the fund kicks into place. As it relates kind of ironically associated with this, the Legislature, I want to say, about 10 or 12 years ago, quote unquote borrowed money out of Title 200 and the environmental-- Department of Environmental Quality at that point did not like that at all. So they make a very conscious effort to maintain a level within the fund. And I don't know what it is, a million, million and a half dollars or so, enough to take care of the issues

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

associated with it, but not so much that it becomes an attractive nuisance that the Legislature would be enticed to come in and, and--

MOSER: typically--

MARK WHITEHEAD: --borrow money from it.

MOSER: Typically, there's around a \$10,000 co-payment made by the owner of the facility where the damage or the spill is.

MARK WHITEHEAD: The EPA requires a \$1 million liability responsibility of the tank owner. What happens is, and, and to your point, there is a \$10,000 deductibility to the fund and then \$10,000 to \$70,000, that \$60,000 range up to \$70,000, the tank owner takes care of 25 percent of that. So the exposure for the tank owner, up to \$70,000 of the overall project is \$25,000.

MOSER: And then there's like a million dollar cap or something like that?

MARK WHITEHEAD: There's a million dollar cap. And so far tank owners and stuff have not breached a million dollars. And in fact, the department fully recognizes that level out there as well.

MOSER: I believe from looking in the information we got, there were like \$11 million in the fund. But if there's a million dollars per loss liability potential out there, you know, you could use that up pretty quickly.

MARK WHITEHEAD: We have had some, we had an interesting case at the 33rd and A Street, the city of Lincoln had a well field, an auxilliary well field that at Normal-- or at Capital Parkway, rather, right there. And so that was one of the most aggressive sites that they've done. And by the time-- that's no longer active now and that approached \$750,000 total. So I don't think there's been another site and [INAUDIBLE] maybe you know otherwise, but I don't think there's been anything within our association that's even approached anywhere close to a million dollars.

MOSER: Thank you very much.

BOSTELMAN: Other questions? Seeing none, thank you for your testimony.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

MARK WHITEHEAD: Thank you.

BOSTELMAN: Are there any other opponents to LB483? Seeing none, anyone like to testify in the neutral capacity? Seeing none, Senator Cavanaugh, you're welcome to close.

J. CAVANAUGH: Thank you, Chairman Bostelman, and thank you, members of the Natural Resources Committee. Just a few notes on the testimony here. Obviously I appreciate Mr. Whitehead coming in and speaking about that. And the, my takeaway is I'm really pleased to see that we seem to all be in agreement, the only question is how, is how to pay for this? That's my, that's my takeaway. I'm gonna take the optimistic look on this. But, but I just want to point out a few things. The handouts I passed out there, the one I wanted to make sure everybody kind of understood was the scientific consensus, Earth's climate is warming. There's-- it's in black and white. There's four lines. Essentially, what it's showing is four different institutions that have measured the, the trajectory of the annual global temperature average and how it's continued to rise over the last 50 years. You heard, I think, Mr. Hansen reference that there were kind of when we started this process with this study in 2013, I think he said, there were some projections about what would happen. And now that we have the, the virtue of hindsight of those seven years, we can see that not only were those projections correct, they were actually conservative. And so this is not a question of whether this is happening. The question is, what are we going to do about it? The debate about whether there's-- the, the weather is changing, whether there's more extreme weather events is, is not an open debate. The question here we have today is, one, whether we're going to study how to respond to it, whether we're going to ask someone who has demonstrated expertise, as Mr. Hansen pointed out from the University of Nebraska, is a leader in this particular type of project, and ask them to present us nonbinding options of what we can do, look at the opportunities to move forward, and then we get to decide which ones make sense for us. This is not going to be some kind of mandate where we are stuck with the outcome of this study. It is just to say, here are your options, these are our recommendations. This is how you would implement it, and these are the benefits of doing those things. And that would give us another tool going forward. And so I, I do, I think before when we put in this bill, there was a lot of conversation that we had about how to fund it. So I appreciate Mr. Whitehead's testimony. We are looking at other funding sources as well. And certainly I actually kind of like his

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

idea of spreading it around and seeing if we can find a couple of places to take some money from. And Senator Hughes, I think you had the question about why not ask the university pay for it. The, the university, I think, did get stuck with the bill last time around because the Legislature refused. Then we had a study, we came up with a consensus. I think it is important that, that we have some skin in the game here where we put our stamp on it and say this is important. We view the results of this as important. Again, not binding, but at least we're saying we think that this is a challenge going forward. We have seen the results of a larger-than-usual 100-year floods more common. We're, we're starting to see, I believe we're entering a drought at this point. We're going to see that cyclical nature of more rain, more drought continue. We're going to see increased temperatures and we're going to see those other unforeseen or unforeseeable byproducts of this, and so we need to be prepared to respond to that. So I appreciate everybody's time and everybody who came testify today. And if you have any other questions, I'm happy to take them.

BOSTELMAN: Senator Moser

MOSER: That we had this come up here previously and had the same discussion pretty much. And I'm wondering if rather than taking tax money, I'm certainly not in favor of taking the underground storage tank money because, again, I think that's an insurance fund and I think we're diverting money out of there for purposes that are not consistent with how they collected the funds from the people who belong to the association. So I think, in fairness to them, that we should, you know, find a way to pay for it ourselves. And I don't-- the reason I don't think it's a good idea to take tax money to study it, because it's I don't think, even if we find something, I, I seriously question whether anybody is going to want to live a different life to, you know, have a smaller impact on the environment. You know, I try to be careful what I do, but I question where we're going to go with it. But if it goes forward, what about going to the Environmental Trust and putting in an application for \$250,000, that's comes from lottery funds. It's an environmental bill. It should score well, I would think, with their system. Is that possible, you think?

J. CAVANAUGH: I don't know the answer to that specific question. And but I had the exact same thought as I was sitting over there thinking about our options. And I am going to be looking into as many other options as we can to find it. And just kind of your other question,

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

and maybe this is a misconception, the idea we don't know what the results are going to be. So it's not necessarily, we're not looking for recommendations as to, you know, people should drive smaller, more fuel-efficient cars. It may come back with recommendations along the lines of what we heard this morning, which is that carbon capture and sequestration. Those types of projects are things that could be recommended under this. There's also, I think that Mr. Hansen referenced the more resilient crops and soil, absorbable soil. One of the effects of this is the lengthening of the growing season. And so those are things that we need to probably be ready to address if we're going to be potentially changing what we're doing. And so it's not just going to be asking-- it's not a study to find out what austerity measures we should take. It is a study to try to identify both problems, but opportunities that are presented by that shift. I mean, Mr. Hansen presented the bad scenario of, I think it was North Platte he was talking about, was going to be like Texas. Note that that would be, you know, being that hot all the time would be very bad, but it would have other effects in other places as well. And so that is the purpose of the study, is to try to capture all of the good and the bad and how we can go forward and what-- make sure that we're not missing opportunities as well as not heading off problems.

MOSER: OK, thank you.

J. CAVANAUGH: And so economic opportunity as well.

BOSTELMAN: Seeing no other questions, that will close our hearing on LB483. Thank you, Senator Cavanaugh.

J. CAVANAUGH: Thank you.

BOSTELMAN: I do want to read into the record-- hold on before you get too far along. You can go ahead and clean that off. LB483 there was written testimony. Proponent Jim Cook-- proponent Jim Cook of the Saint Paul Climate Justice team; Nathan Ehmke, AIA Nebraska; Mike [SIC] Esposito, City of Lincoln; Matt Schaefer, the Nature Conservancy; Anica Brown from herself. And then there was a number, a number of position letters also submitted on LB438 that the committee has and will be read into the record. OK, with that. Senator McCollister, LB266, you're welcome to open.

McCOLLISTER: Have you opened the hearing, Mr. Chairman?

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: Sorry?

McCOLLISTER: Have you opened the hearing?

BOSTELMAN: Yes.

McCOLLISTER: Awesome.

BOSTELMAN: You're good to go.

McCOLLISTER: I do recognize, and I'll be brief, that I'm the last hearing for this committee of the day and many of you are going to want to get on the road. So I'll proceed and be brief. Good afternoon, Chairman Bostelman and members of the committee. I am John, J-o-h-n, McCollister, M-c-C-o-l-l-i-s-t-e-r, and it's my pleasure to introduce LB266. Today in 2021 Nebraska is among 12 states out of 50 that has no semblance of a clean or renewable energy standard. It is noteworthy that Iowa introduced their alternative energy law as early as 1983. Does our unique public body-- public power system require the need for Nebraska to have a clean, stand for clean energy? Like 38 other states, I do believe it does. The nationwide move toward clean energy has occurred without price increases in the Southwest Power Pool. Clean energy is a win-win for the consumer and the environment. The major action piece in this bill is that all public power entities shall work to achieve a net zero carbon emissions by 2050, 30 years. This gives Nebraska's public power suppliers nearly 30 years to achieve the goal of net zero carbon emissions, and it's something OPPD has already committed to do. In Section 3, Subsection (3), the term renewable energy generation facility is broadly defined. Based on this definition. The demand side load management by utility or its customers is included as well as supply side. Supply side resources-- correction, supply side sources listed in the bill include a variety of technologies that are currently available. The definition of renewable energy generation facility also includes related investments such as transmission and distribution that are necessary components of the utilities systems and may include things like battery storage that will be increasingly important as technology advances. During the next 30 years, renewable energy technology will improve. Generating costs and prices to consumers will continue to be steady or go down. LB266 is a good starting point that would assure Nebraskans that ut-- electric utilities will be doing the best they can for our citizens and the environment. Finally, I want you to know that I did not intend

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

this bill to include natural gas production for space heating.
Repeating. This bill will not include natural gas for space heating for public utilities. I am open to considering any other amendments which would improve the bill. With that, I rest my case, Mr. Chairman.

BOSTELMAN: Thank you, Senator McCollister. Are there questions from committee? Senator Hughes.

HUGHES: Yes, thank you, Chairman Bostelman. Thank you, Senator McCollister. Welcome back to the fun committee.

McCOLLISTER: Thank you, sir.

HUGHES: Good to see you back here. I guess I have a question. I have a little problem with only allowing your definition of renewable energy in order to reach a carbon-free energy footprint by 2050. Would you be willing to look at SMR, small modular reactors in order to meet the demand?

McCOLLISTER: Absolutely. In fact, I think we included nuclear in the bill itself.

HUGHES: OK, and I apologize if it's in there and I haven't read that. But I think that's a very important component to trying to-- if the goal is to eliminate or reduce our carbon footprint, which seems to be a very popular thing to be discussing nowadays, that we absolutely have to look to nuclear energy. And I think the new technology, and Senator Bostelman could probably talk more intelligently about that than I can, but the new technology of the small modular reactors, I think has to play a very prominent role in meeting our base electric generation needs. I just wanted to get, get your thoughts on that.

McCOLLISTER: I absolutely agree, Senator Hughes, and I would be happy to incorporate that in a more explicit way in the bill. I think also battery storage is likely to be a game changer as well. So the technology is evolving very rapidly, and I think we should respect that in the bill.

HUGHES: And probably the basic footprint of between solar and wind, compared to a SMR, you know, should be a consideration as well. We seem to be expanding our cities and taking up good farmland, you know? And feeding the world is, of course, very close to my, my heart. So not taking up vast swaths of, of productive farmland for wind

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

generators or, you know, especially solar farms, I think the opportunity for looking at the small modular reactor technology should, should be part of any plan.

McCOLLISTER: I agree, Senator. And we should be open minded about that and respect technology, technological changes that are, that will likely occur.

HUGHES: Very good.

BOSTELMAN: Senator Gragert.

GRAGERT: Thank you, Chairman Bostelman. And thank you for your testimony. Couple things in the bill, I guess, Senator McCollister is on page 2, line 8 you mentioned a near zero emission. And then at the end of the bill, it's net zero. I guess when are-- what is the definition of net zero carbon emissions met? When will that be?

McCOLLISTER: Well, that means that the generating facility would be at zero emissions. I think the definition is pretty close, but maybe that's something we need to better define as we move forward with this bill.

GRAGERT: OK. And like you already mentioned, and I'm going to go to the goal next, and I guess this is where I kind of reading it is a goal. And for me, a goal, a good goal is measurable. Which you have a time assigned, which you have at 20-- but I guess achievable is be my question on the 2050 even, 30 years from now. Battery storage, I think you're right. That's going to make or break, you know, to some, to some degree on, I guess what I'm looking at when I was looking at this up in northeast Nebraska with our irrigation is reliability and capability, you know? Capability or capacity for electricity. And, you know, being able to, being able to call up at that point. I guess I look at a more balanced, you know, source in the end. I think you do, too, like fossil, wind, solar, hydro, nuclear, you know, being, being a combination of all those for real resiliency and reliability, if you will so.

McCOLLISTER: I see that's a good point. Having constancy of supply is absolutely critical, not just for rural areas with their irrigation systems, but for urban areas as well. So that's why we put into the bill in the case of an emergency, the utilities could, you know, run

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

their, their natural gas turbines. They could rely on imported power generated by coal plants. But you have to have constancy of supply, I recognize that. So that's why we put into the bill that, you know, it gives those utilities the ability to switch back and forth in the case of an emergency. And, you know, this is, this is a bill, this is a bill that we're trying to achieve this in 30 years. And, you know, there's, there's no requirements that it-- they absolutely have to do it. You know, they have ability to deviate if they must. And as we mentioned, technology will change the nature of this situation anyway.

GRAGERT: I guess, Senator McCollister, where I came with that was on page 4 of, in line 3 of page 4 where it says power, you know, the public power supplier shall achieve. I mean, that, that is not may achieve. You know, shall and will, we get into those words, but by 2050. I know that's 30 years out, but I-- a little tough mission.

McCOLLISTER: There's one other thing. In most cases, most of these utility, utilities have already made this commitment. I think maybe LES has it, but I know for a fact OPPD has done it. So it's-- I'm not putting into anything in the bill that is something that they, they can't achieve, at least in my view.

GRAGERT: OK, thanks.

BOSTELMAN: Senator Cavanaugh.

J. CAVANAUGH: Thank you, Chairman Bostelman. Thank you, Senator McCollister, for being here today and bringing this bill. Just kind of piggybacking on what Senator Gragert was saying about that last section there. So how does that Section 6 interplay with that shall, where it shall not apply if the board of directors declare that they can't comply with it?

McCOLLISTER: Well, I think it just gives them an out. And so I don't, I don't think that they're mutually exclusive. I think the, the, the one which simply gives the utility to the opportunity to deviate if necessary. But the utility directors need to make that declaration.

J. CAVANAUGH: So, well, my reading of it, I guess, would be that they have to make an affirmative statement that they are not, that they cannot comply with this net zero as opposed to right now. You're saying LES, and I think you said OPPD both have made affirmative

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

statements that they are going to comply, or they are going to achieve the--

McCOLLISTER: I don't want to put words in their mouth, but it's our understanding that OPPD has already made that declaration. I don't know about NPPD and LES. I know, I think at least LES plans to testify here today, so we-- you can ask them directly.

J. CAVANAUGH: But so just clar-- there is an out if it is not feasible for an--

McCOLLISTER: That's--

J. CAVANAUGH: OK.

McCOLLISTER: That's what we hoped to put into the bill, because I think they need that flexibility.

J. CAVANAUGH: Thank you.

BOSTELMAN: So there's no specifics regarding how the program will operate other than that the state with that public power supplier shall achieve net zero carbon emissions by 2050. Then how is it, and whom will establish compliance? How will it be measured?

McCOLLISTER: We haven't included that in the bill. You know, they have an independent board of directors and we're going to leave, leave it to the, each utility to figure out the way to comply.

BOSTELMAN: So I guess one question I have you-- I think all the utilities have already set out standards of where they want to go as far as carbon emissions or however that is. Why is it the, why is there a need for this bill? Shouldn't, shouldn't the, the generators, the public power districts that have already adopted and are moving in that direction, aren't they the ones that really are responsible to do that and are already doing that? So why this bill?

McCOLLISTER: Well, I, and this bill is somewhat aspirational. I understand that. And as I ind-- as I indicated in the opening, Nebraska is only one of 12 states that don't have any clean energy standards. And it's my hope to rectify that situation with this bill. Most states, 38 other states have, have some standards. And I think it's important for us to move in that direction.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: I think Senator Gragert spoke about this earlier. The term renewable energy standards has a specific meaning relating to establishing a regular schedule of meeting increasing percentages of retail electricity sales with renewable energy, and such programs define periodically, usually annual increases in percentage of renewables, which qualifying technologies in compliance reporting. In Section 3, it references a certain percentage of zero carbon or a low carbon resource utility sales, but is otherwise silent on what those percentages are or how they increase. Is there only one percentage or one deadline, say, in Section 5, where it says 100 percent net zero carbon emissions by 2050?

McCOLLISTER: You may recall, Senator, that in previous bills of this nature, I put an increasing amount of renewables until the year 2050. So I thought we'd make this bill a little easier for the utilities to comply with and we only put in one date, 30 years hence, which I thought would make them feel more comfortable.

BOSTELMAN: So then they could either, they could either do it this year or they could do it in year 2050?

McCOLLISTER: Yes, sir.

BOSTELMAN: Their choice.

McCOLLISTER: Their choice.

BOSTELMAN: Got it. OK, are there any other questions? Seeing none, thank you, Senator McCollister. Will you stay around for closing?

McCOLLISTER: I think so.

BOSTELMAN: OK. Anyone who would like to testify as a proponent for LB266, please come forward. Afternoon, Mr. Davis.

AL DAVIS: Hello, again, Chairman Bostelman.

BOSTELMAN: How are you?

AL DAVIS: Good, how are you? My name is Al Davis, A-l D-a-v-i-s. I'm here today to testify as the registered lobbyist for the 3,000 members of the Nebraska chapter of the Sierra Club. We want to thank Senator McCollister for his strong interest in renewable energy. LB266 imposes

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

no absolute restrictions on how power is generated and distributed by our public power entities, but does demonstrate the state's commitment to move quickly towards net zero status. It is remarkable how rapidly renewable energy has been adopted across the nation, but is still regarded as marginal and suspect by many. The fiscal note on the bill states that OPPD has moved from a base of 4 percent renewable energy in 2010 to 50 percent renewable energy in 2021, and that overall the state is now 42 percent net zero. That is astounding to me. The establishment of the Renewable Energy Standards Act in LB266 offers a framework to build a power system on over the next 30 years. It includes several suggested points to consider in developing the long-range plan with the goal of being at net zero by 2050. The bill does include references to nuclear energy as a renewable source, which the Sierra Club disputes because the byproduct is highly toxic and requires centuries of containment. That said, nuclear power is no longer cost-effective when considering the required safeguards. The nation's corporations have made major commitments to renewable energy. Nebraska has gained several massive new business investments only because it was able to offer renewable energy to the corporations, which stipulated that acquiring green energy was a prerequisite for location in the state. This trend will only accelerate over the next decade. Adoption of Senator McCollister's Renewable Energy Standards Act will send a message to corporate America that Nebraska is open for green business. Thank you, and I'll take any questions.

BOSTELMAN: Thank you, Mr. Davis. Are there any questions? Seeing none, that you for your testimony.

AL DAVIS: Have a good afternoon.

BOSTELMAN: Next proponent. Seeing none, would anyone like to testify in opposition to LB266?

SHELLEY SAHLING-ZART: Good afternoon, Senator Bostelman, 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-Z-a-r-t, I'm vice president and general counsel for Lincoln Electric System and I am here today testifying for the Nebraska Power Association in opposition to LB266. The Nebraska Power Association, as you know, represents all of Nebraska's publicly owned electric utility systems, including municipalities, public power districts, public power and irrigation districts, rural public power districts and cooperatives. I want to

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

start by saying we have spent a lot of time over the years working collaboratively with Senator McCollister on renewable energy legislation. So it gives me no pleasure to come in and oppose his bill. But, and I also want to say that our position in opposition to this bill is not antidecarbonization, it's not antisustainability, it's not anticlimate change, it is pro-local control. The structure that this Legislature put in place for public power in the state provides that we are governed by our local elected and appointed boards of directors, and they are charged with making those public policy decisions. And the role of the Legislature is to enter the field in some areas and give us policies when you don't feel we're doing what we're supposed to, or to correct a problem. And we don't have that here because the electric utilities have been moving forward toward decarbonization for a while. And now much of it is formalized into goals. The Omaha Public Power District does indeed have a net zero carbon goal by 2050. The Municipal Energy Agency of Nebraska, net zero carbon by 2050. Lincoln Electric System, we just adopted a goal a few months ago, net zero carbon by 2040. And Nebraska Public Power District, as I understand it, is working on a goal and anticipates having a goal yet this year. The vast majority of the remaining electric utilities in the state get their power from one of those entities. So from our standpoint, we don't see a problem to be fixed here, the utilities are working on that. These goals, you've talked about some of the technology, the path and pace to achieving these decarbonization targets is going to depend on a number of things. Technology is chief among them. Battery storage technology, earlier today you heard about carbon capture and storage. There's going to be a lot of things, and they're going to, either they're going to help increase that pace. If it doesn't come along too quickly, it might slow the pace. But we're going to do that at the local level because the impacts of the decisions we're making, we all have different investments in resources, and those impacts are going to be felt by our customers. And by keeping those decisions at the local level, you allow the customers that we serve to work with us and to participate in our processes to help determine what goal is comfortable for the customers in those areas. We try to balance reliability, affordability and sustainability, and we try to work with our customers. I can tell you with Lincoln Electric System, we had a yearlong process with our board. We had an extensive public input process trying to get as much input from the community as we could as to what level that goal should be at. We arrived at net zero carbon by 2040, the most aggressive goal

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

in the state right now. Senator McCollister is right, there are a lot of clean energy standard, standards, statewide standards in many states. Many of those states that have those standards exempt public power utilities for the very reason I just told you, public power is typically governed by those local boards of directors. So the concept is there. We're doing it, we're moving toward that. There's a lot of work that's got to be done to get there. We just don't think this bill is necessary right now because it's already happening. So with that, I would take any questions.

BOSTELMAN: Thank you for your testimony. Are there any questions from the committee members? Senator Cavanaugh.

J. CAVANAUGH: Thank you, Chairman Bostelman. Thank you. I'm sorry, could you say your last name for me?

SHELLEY SAHLING-ZART: Sahling-Zart.

J. CAVANAUGH: Sahling-Zart?

SHELLEY SAHLING-ZART: Sailing on the ocean.

J. CAVANAUGH: I'm trying to write it down, and you're obviously skilled at doing this, so you go quickly.

SHELLEY SAHLING-ZART: Sorry.

J. CAVANAUGH: That's OK.

SHELLEY SAHLING-ZART: I know you've had a long day too.

J. CAVANAUGH: I'm the new one here. For those goals that you spoke about, are they including nuclear as part of that zero carbon?

SHELLEY SAHLING-ZART: They're net zero carbon. So, yes.

J. CAVANAUGH: OK, that was really my question.

SHELLEY SAHLING-ZART: They could. I mean, I don't you wouldn't say they affirmatively could, but they could. That will be up to each utility to determine what they use to meet that. But it would certainly be a carbon-free resource.

J. CAVANAUGH: Thank you.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: So I do have a question. I think there's a section here that requires energy to be purchased, but I'm not so sure if it allows the energy to be purchased only from Nebraska generators or from the SBP. And I think it's Section--

SHELLEY SAHLING-ZART: Look at it quick.

BOSTELMAN: I had notes on it.

SHELLEY SAHLING-ZART: Can construct or acquire ownership--

BOSTELMAN: Section 4 sub (2).

SHELLEY SAHLING-ZART: Entering into contracts to purchase electricity from renewable energy production facilities. It doesn't say. So that's not clear, I don't think, under the bill.

BOSTELMAN: OK, so it could be either?

SHELLEY SAHLING-ZART: I would, I would argue that could be either.

BOSTELMAN: So there could be potential that you're purchasing off the grid that's coming from a nonneutral carbon or zero carbon source?

SHELLEY SAHLING-ZART: Well, you would probably be entering a power purchase agreement specific to a renewable energy facility, for example, our contract with the Arbuckle wind farm in Oklahoma.

BOSTELMAN: OK, that makes sense. Seeing no other questions, thank you for your testimony. Next opponent, please. Good afternoon.

RICK KUBAT: Good afternoon, Chair Bostelman, members of the Natural Resources Committee. My name is Rick Kubat, R-i-c-k K-u-b-a-t, here today on behalf of the Metropolitan Utilities District of Omaha. MUD in Omaha serves roughly a third of our state's citizens with their potable water and natural gas needs. Ms. Zart did a really nice job of going over a lot of points that we'd like to make, one of which is we believe that what Senator McCollister is doing here as far as intent is a good thing, but we believe that our locally elected boards are already going down that path. At least in the Omaha metro area, MUD is currently working with the Omaha Public Power District on their Power with Purpose program. And when we start talking about energy, I look at it as a 5,000 piece jigsaw puzzle. Sometimes people are focused in

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

on narrow issues. Natural gas is very much part of a transitional energy that enables some of our more environmentally friendly or fuel sources. Specifically when we're talking about OPPD's solar generation plans going into the future, they're going to be using reciprocal natural gas engines to, to, to make sure that those facilities can continue to work akin to what we need with wind with reciprocal generation. So it's not like we can just wake up one day, shut off the natural gas valve. But when you talk about baseload generation, and as we're transitioning to more environmentally based fuels, natural gas plays a pivotal role. The last thing that I'd say is today is a great example. It's a cold day, and I think if you were to take a look at the Southwest Power Pool, I--

BOSTELMAN: No, you're fine. You're fine. She didn't shut it off.

RICK KUBAT: If you were to take a look at the Southwest Power Pool, we're not getting an abundance of sun or wind blowing. Specifically right now it's critical for the energy that we can reliably and efficiently provide to our public right now that we're able to use natural gas. With that, happy to answer any questions that you might have.

BOSTELMAN: OK, thank you for your testimony. Senator Cavanaugh.

J. CAVANAUGH: Thank you, Chairman Bostelman. Thank you for being here, Mr. Kubat, it's always a pleasure to see you. Just so we're clear, the, the necessity for, or the value of natural gas generation as a company's renewables like wind and solar is the ability of a natural gas baseload generation plant to fire up quickly, right?

RICK KUBAT: That's correct, and--

J. CAVANAUGH: So it's--

RICK KUBAT: --and to provide redundancy and, and I would say reciprocal power generation.

J. CAVANAUGH: It goes well with them because it can be turned on-- a nuclear plant, it takes days, I don't know how long, somebody here probably knows better, but you can't turn it on in a matter of hours, probably. But a natural gas plant could turn on as it accompanies those other intermittent power sources, right?

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

RICK KUBAT: For sure. Absolutely.

J. CAVANAUGH: Thank you.

BOSTELMAN: So actually, I'll correct that. Small modular reactors, you can turn them on and off on demand. So large nuclear power plants, perhaps that is the way. Same thing with the natural gas, you have to ramp them up and you have to ramp them down. You just can't turn the switch on. Actually, a small modular reactor, you can actually do that. And at all-- and I don't know if you're aware of those or not, if you've looked, studied those at all.

RICK KUBAT: I think it's fair to say that I need to spend some more time with you, Senator Bostelman. It would certainly be a subject matter that you'd have much more experience than I have.

BOSTELMAN: Sure, sure. No, that's fine. I mean, I just, just so you know. I mean, it's new technology that's out there. I mean, and there's even molten salt reactors that actually use spent fuel. So they actually clean up spent fuel. So those are just things that are out there. But I appreciate, appreciate your testimony today and coming in. Any others?

J. CAVANAUGH: I-- it was not intending to be a trick question.

RICK KUBAT: No, sorry. It's fair enough. I'll, I'll just, if I can. This is my goal, this is going to-- one of my goals is this will be the last time. I happen to live in Senator McCollister's, McCollister's district, and I informed him that I hope to never oppose any of his bills ever again. So I'm happy to work with him on the bill going forward and--

BOSTELMAN: As, as we work on bills in this body, you know, we support and we oppose bills day to day each day. Each bill is different. So, you know, I'm sure Senator McCollister understands that and you're just fine. So thank you--

RICK KUBAT: I--

BOSTELMAN: --I appreciate you coming in.

RICK KUBAT: I like only being on the supportive side. I want to stay in everybody's good graces.

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

BOSTELMAN: I hear you. Thank you for your testimony.

RICK KUBAT: Thank you for your time, Senator.

BOSTELMAN: Anyone else like to testify in opposition to LB266? Anyone like to testify in a neutral capacity on LB266? Good afternoon.

TIM TEXEL: Senator Bostelman, members of the committee, my name is Tim Texel, T-i-m, last name is T-e-x-e-l. I'm the executive director and general counsel in Nebraska Power Review Board, and we are the state agency with primary jurisdiction over electric suppliers in the state of Nebraska. I think I'm the last person testifying on the last bill. I'm going to be very brief. My board authorized submitting a letter to, and you have that brief. It's a brief letter, three paragraphs that deal with that. They did want me to be here to mention the two points and answer any questions on them. My board is neutral on LB266. We just have two technical issues on it. On page 3, lines 25 to 27, it states that a renewable energy generation facility meets and includes, and quote, The transmission and distribution facilities necessary to conduct the energy produced by a facility described in subdivision (3)(a) of this section to users, close quote. A literal reading of this provision would define the entire transmission grid to be part of the facility. Obviously, I'm sure that's not the intention. So I wanted to offer that that might need to be addressed in the bill. It seems that the intent is probably to define the transmission facilities interconnecting the facility to the transmission grid. And if so, it may be preferable to, for subsection (c) to say: The transmission and distribution facilities necessary to interconnect a facility described in subdivision (3)(a) of this section to the transmission grid. I thought that might address what it seems the intent was. On page 4, line 6 in Section 6, it states that the Renewable Energy Standards Act shall not apply to a public power supplier if the board of directors of such public power supplier makes a certain declaration. Based on the context, it appears this provision is intended to apply to all public power utilities in the state. But by limiting the body that can make that necessary determination to only boards of directors, it would only apply to public power districts and cooperatives. It wouldn't apply to municipalities. So they have either a village board or a city council or possibly a board of public works, but the application of that standard wouldn't apply and wouldn't make it available to municipalities. I don't think that was the intent. I talked with Senator McCollister on that, but it might be

Does not include written testimony submitted prior to the public hearing per our COVID-19 response protocol

preferable to use the term "governing body of such public power supplier", and that would include all of them. So that's the two points. The board points out these issues are technical and they're not intended as criticism, but the committee may want to take them into account on the bill. So with that, that's all I have. Thank you.

BOSTELMAN: Thank you, Mr. Texel. Are there any questions from the committee members? Seeing none, thank you for your testimony.

TIM TEXEL: Thank you.

BOSTELMAN: Anyone else like to testify in the neutral capacity on LB266? Seeing none, we do have written testimony from Matt Schaefer, a proponent for the Nature Conservancy. Opponent, Jill Becker from Black Hills Energy. And we do have a number of position leaders, both proponents, neutral and opponents on LB266, and those will be read into the record. With that, Senator McCollister, you're welcome to close on LB266.

McCOLLISTER: Well, I know that I'm keeping Senator Hughes from getting on the road, so we'll be brief. And I appreciate Mr. Texel coming up and his comments. And of course, if this bill were to move forward, we would incorporate the changes he has suggested. I do need new-- need to acknowledge that the public utilities in this state have done a magnificent job heading toward zero carbon emissions. They have done that. And from that standpoint, I'm grateful for their efforts. I also understand that MUD is, is opposed to the bill on those same kinds of efforts, came-- the same kind of issues that they have elected boards of directors and they want to retain the prerogatives they have as an elected board. So I understand that as well. But I'm grateful for your attention and thank you for hearing me on this, this Thursday afternoon prior to an adjournment and a four-day weekend. So thank you, Mr. Chairman.

BOSTELMAN: Thank you, Senator McCollister. Are there any questions for committee members? Seeing none, that will close our hearing on LB266. Thank you all for being here this afternoon.