BOSTELMAN: Good afternoon, welcome to the Natural Resources Committee. I'm Senator Bruce Bostelman, I'm from Brainard, and I represent the 23rd District. I serve as Chair of this committee. We have two confirmation hearings that we're going to hear today, both members are here. So once they speak, then we'll have any proponents or opponents. And I think what we can do is just have our committee members introduce themselves, starting on my left with Senator Cavanaugh.

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

MOSER: Mike Moser, Platte County and parts of Stanton County. It's District 22.

BOSTELMAN: On my right.

AGUILAR: Ray Aguilar, Grand Island, District 35.

WAYNE: Justin Wayne, District 13, north Omaha, northeast Douglas County.

BOSTELMAN: So our legal counsel is on my left, it's Cindy Lamm. And our committee clerk is Katie Bohlmeyer on my right. And Malcolm and Joseph-- or Malcolm is here today to help us out. So with that, as I say, we have two gubernatorial appointments we're looking at today. So the first one will be a reappointment of Dallen Juelfs, if you could please step forward.

DALLEN JUELFS: Right here?

BOSTELMAN: Yeah, right there. Yeah, this is a little bit different room, so a little bit further away. So if you could just have a seat and then tell us your name, spell your name for us. Tell us a little bit about yourself, you know what, maybe some things you've done on the, on the board, commission so far. Some interest along those things would be helpful.

DALLEN JUELFS: First of all, thank you for having me and listening to my, I guess, background or information. I will say that Katelyn said that we had all the time we needed. And I don't think she really meant that. And I'm not going to be here more than two hours, I promise. So but my name is Dallen Juelfs. I was born and raised in western Nebraska. Actually I was born in Sidney, so you might say I've kind of done a full circle, because the Oil and Gas Commission is located in Sidney, Nebraska. Lived in Kimball for most of my life. I was involved in banking and insurance, and my dad got into the oil and gas business

in about 1969. So I grew up in the oil fields as a high school and college guy in the summers. And graduated from the University of Wyoming in accounting and went to work for a CPA firm in Casper for about three years. In 1977, my father, Stan Juelfs, some of you might be old enough to remember he ran for governor against Charlie Thone. He got whipped pretty bad, very bad. It was my first taste of state politics anyway. And I have been involved in city council, county commissioner in Kimball over the years. I, I was involved, like I said, in the oil and gas business, in all facets of it from about 1971 to 1998. And my father passed away in 1990, so we did liquidate to pay creditors and employees and family members, so I got out of it. But I indirectly got back into it in banking. I moved to Casper, Wyoming, and became involved in finance for oil and gas-related business, production and insurance companies for 11 years. And after I, in Casper, I got into the hotel business. I tell everybody I left, I left a great-paying job in banking to go to my, go to work for my wife in the hotel business, to clean toilets for nothing. And thoroughly enjoyed that. Here about four or five years ago, six years ago, we sold the hotel and decided to kind of semi-retire. We moved to Lincoln, because I love sports, and you know what's happened to the football program since I moved back. So I don't know that I'm to blame, but things haven't gone too well. We hope we-- hopefully they will turn around. We love Nebraska. Been married to the same gal-- she would be here, but she's usually at my side for everything like this. But we have grandkids in Denver that mom and dad are gone, and she's taking her grandkids and pets. So she's in Denver while I'm here. And we've been married for 40 years, have three kids, five grandkids scattered from Fairbury, Nebraska to Denver, and a son that lives in outside Scottsbluff. We still have a place in Washington, Nebraska. I very much enjoy the oil and gas industry. I have served on the commission for the last two years. I replaced Bob Goodwin. I don't know if you guys-- Bob passed away of cancer about three years ago, and I filled his vacancy a little over two years ago. And so I'm here appointed by Governor Ricketts ready to ask any-- answer any questions you might have.

BOSTELMAN: Thank you, Mr. Juelfs. For the record, this is a reappointment to the Nebraska Oil and Gas Conservation Commission. With that, are there any questions from committee members? Senator Cavanaugh.

J. CAVANAUGH: Thank you, Chairman Bostelman, and thank you for being here, Mr. Juelfs, and your willingness to serve. Did I get that right, Juelfs?

DALLEN JUELFS: Yes.

J. CAVANAUGH: Thank you. So I was just kind of looking at-- I saw the title of this, and I-- so I of course pulled the statute because I was curious what the nature of the commission was. Does this-- do you have authority over the carbon capture and sequestration wells then in Nebraska?

DALLEN JUELFS: Well, under the new legislation, the LB650-- in fact, we just had our second hearing yesterday, the Oil and Gas Commission in Sidney, so Paul and I have traveled all the way to Lincoln from yesterday, we do have the, I guess, the partnership of working with the ethanol industry to recapture CO2. And so it's in its infancy. We have a budget. I think we've been appropriate \$200,000. We've hired a geologist that will be specializing in that part of the industry. But we have yet to, like I said, we're just in the infancy of doing that. I'm, I'm excited about forming a partnership with the ethanol industry to see what we can do to help their environmental concerns.

J. CAVANAUGH: So it sounded like you were about to say-- have you not had any applications for--

DALLEN JUELFS: No.

J. CAVANAUGH: --wells yet? OK, that's-- is that what you were saying? And your partnership with the ethanol industry, and correct me if I'm wrong, the injection well is not limited just to ethanol. It could be for any carbon, captured carbon and can then be sequestered, right? It's just-- is that correct?

DALLEN JUELFS: I believe so.

J. CAVANAUGH: OK.

DALLEN JUELFS: Yeah.

J. CAVANAUGH: I don't, I-- that was my understanding when we passed a law, which actually we had the hearing and everybody here. But that, is that, that ethanol is the industry that is most likely to take advantage of this, but they're-- it's not limited to that by statute or by physics, I guess.

DALLEN JUELFS: Yeah, I'm not real sure, but I know there's been discussions about power plants and other industries that-- the possibilities. So I'm not sure LB650 restricts us to just ethanol, and I, I can't answer that. Sorry.

J. CAVANAUGH: That's all right. And so you're in the infancy, so does that mean you guys are going through a rulemaking process to determine how the application should go, even though you don't have an application? I guess, where are you in the--

DALLEN JUELFS: It's my understanding what we're required to have is two hearings, which we had one in January and one yesterday, to go over the, basically the rule changes, the rules. That I believe will, after comments, recommendations of any additions or subtractions, some correction of grammar, things like that, it would come back, I believe, to the state, to the Attorney General, and they will refine it at that point in time. Through the two hearings, we had no objections to the ruling. We had support, I think the first go around, of five different individuals or companies and nobody that spoke basically as a neutral person or industry.

J. CAVANAUGH: And these would be five ind-- companies that might be interested in getting a license to operate one of these wells?

DALLEN JUELFS: I'd have to go back and look at who, yeah.

J. CAVANAUGH: That's OK. And just to clarify that you, this board would not have jurisdiction over potential pipelines, the, the carbon capture sequestration pipelines?

DALLEN JUELFS: We have no jurisdiction over pipelines.

J. CAVANAUGH: Thank you.

BOSTELMAN: Other questions? Senator Hughes.

HUGHES: Thank you, Chairman Bostelman. Mr. Juelfs, thank you for coming in. Good to see you again. Thank you for your service to the state. With the jump in price of oil and gas recently, are you seeing uptick in drilling permits?

DALLEN JUELFS: In Nebraska, we have the last two years, we've seen quite, quite a few new permits. South-central Nebraska is enjoying some pretty good success, and a lot of that is based on the new technology seismic, 3D seismic, and we're seeing quite a bit of activity and success in, in that area. In the--

HUGHES: So that's kind of southern Phelps and what other--

DALLEN JUELFS: Well, around the McCook area.

HUGHES: Oh, OK.

DALLEN JUELFS: Trenton. Anywhere down along the Kansas-Nebraska border is--

HUGHES: OK.

DALLEN JUELFS: --enjoying pretty good success.

HUGHES: OK.

DALLEN JUELFS: There's been some activity in western Nebraska, but unfortunately for the operators, a lot of dry holes. But yes, with, with the oil price increasing to where it is now, that's going to drive more and more interest in drilling and starting a lot of wells that were shut in when we had, two years ago when we had \$20 oil or negative prices. So you're gonna see the oil production in the state right now will probably be close to 5,000 barrels a day at any time.

HUGHES: So are you seeing-- have you had any new requests for injection wells recently?

DALLEN JUELFS: There is-- I'd have to look at the reports, but yes, from time to time, we do have. And those injection wells are usually associated with secondary recovery to, to help with the enhancement of oil production.

HUGHES: OK, very good. As I said, thank you for your service to the state.

BOSTELMAN: Senator Moser.

MOSER: I was looking at the commission that you're being appointed to and it says it's Nebraska Oil and Gas Conservation Commission. What's the con-- conservation part of your duties? What are they--

DALLEN JUELFS: Well--

MOSER: Is that just a name leftover from way back when and you really don't do that?

DALLEN JUELFS: No, I think, you know, we, we do our best to-- I don't know what your definition of conservation is, but a lot of our duties are to make sure that when a company drills, that there is a fair assessment of the area. They determine who-- which landowners or [INAUDIBLE] owners should receive how much of each well. Some of that

is a lot of science and some of it's some guess work. As far as environmental, it's our job to not only promote the industry, but to make sure they do it correctly, to do it safely. And like any industry, we have some bad apples out there and we, you know, we try to crack down on them and make sure they do things right. And so when you say the conservation, it has been in the name for years and years and years. But I-- my job, I feel, is to promote the industry, to make sure they do it safe and, and friendly to the environment.

MOSER: All right. Thank you.

BOSTELMAN: Other questions? Seeing none. One thing, could you please spell your name for us? For the record. We just--

DALLEN JUELFS: First and last? D-a-l-l-e-n, last name is J-u-e-l-f-s. And sorry, because you told me that and I failed to answer it.

BOSTELMAN: And I didn't catch it either so. They did. That's all we have for you. Thank you very much for coming in today. We appreciate it.

DALLEN JUELFS: And thank you to all of you and everything you guys do. Appreciate it.

BOSTELMAN: Would anyone like to testify as a proponent-- you can have a seat-- as a proponent for the reappointment of Mr. Juelfs to the Nebraska Oil and Gas Conservation Commission? Seeing none, would anyone like to testify in opposition? Seeing none, anyone that would like to testify in the neutral capacity? Seeing none, that will close our hearing on the reappointment of Mr. Dallen Juelfs to the Nebraska Oil and Gas Conservation Commission. Well, next we'll open up the hearing for the appointment of Paul Strommen to the Nebraska Oil and Gas Conservation Commission. Paul, would you step forward.

PAUL STROMMEN: I've got a handout for you folks, which might answer a number of questions [INAUDIBLE].

BOSTELMAN: So just like after you sit, state and spell your name. And then you can--

PAUL STROMMEN: Sure.

BOSTELMAN: --information.

PAUL STROMMEN: Yeah. Paul Stroman, P-a-u-l, Paul, Strommen, S-t-r-o-m-m-e-n.

BOSTELMAN: Go ahead.

PAUL STROMMEN: OK. I'm going to read off this. I wrote a little script, just so I knew exactly what I was saying, didn't want to step over myself or anything. So my name is Paul Strommen. Thank you for agreeing to consider my application for the open commissioner's position at the Nebraska Oil and Gas Conservation Commission located in Sidney, Nebraska. My wife, who is here, Kendra, and I have lived in western Nebraska for over 15 years, having lived in both North Platte and in Sidney, where we currently reside. I've worked for Mid-America Bio Energy and Commodities LLC, which is headquartered in North Platte, Nebraska. It's part of the corn ethanol industry since 2006. During that time through the present, I've been active in the renewable energy sector. I've worked with the Nebraska Ethanol Board, the Colorado Wyoming Petroleum Marketers Association, Renewable Fuels Nebraska, Growth Energy, Renewable Fuels Nebraska. I've worked with refineries on the upstream side: Suncor America, Petro-Canada, Sinclair, HollyFrontier. So just to name a few of those are the ones sort of on the western slopes of central U.S. I've worked on carbon sequestration research with NPPD, the Nebraska Public Power District, and I've worked on carbon sequestration research with Nebraska Oil and Gas Conservation Commission. Historically, the Nebraska Oil and Gas Conservation Commission has dealt with gas and oil, obviously. The commission typically deals with applications for pooling unitization, secondary recovery, tertiary recovery, co-mingling, increased density spacing, injection wells. But currently, the Nebraska Conservation Commission has been asked to expand their governance into the geological storage of carbon dioxide and is tasked with CO2 sequestration permits. For those of you not familiar with carbon dioxide and sequestration, it's the process of storing carbon in a carbon reservoir underground. Carbon dioxide is naturally captured from the atmosphere through biological, chemical, physical processes. Artificial processes have been devised to produce similar effects, including large-scale atmospheric capture sequestration of industrial-produced CO2 using subsurface saline aquifers, which we're looking at out west, reservoirs, ocean water, aging oil fields, other carbon sinks, bioenergy with carbon capture and storage, and direct air capture when combined with storage. Some of the positive aspects of CO2 sequestration or carbon capture are that along with removing the excess pollutants from the air, deep injection of carbon dioxide produced from industrial sources such as power plants can be trapped, liquefied and injected into the aging oil fields, which pressurizes the oil to enter the wells, produce a process called enhanced oil recovery, which Dallen pointed to, which enhances the extraction of

fuels like oil and natural gas from their deposits. Earlier, we were using water for that process, so CO2 would be a better. Liquefied carbon dioxide can be injected deep inside mineral deposits, such as magnesium and calcium silicates to react and form carbonates, such as limestone, which remain underground. That's sort of in the beginning phase right now. Gas could be equally easily liquefied and transported via pipeline, which makes deep injection convenient if we were to pipeline an out-of-state or find reservoirs within the state where we could do that. And as of yet, there was no reports of dioxide leaking out of injection wells. Hopefully that's not expected to happen. So I feel that with my experience, the independent research with sequestration of carbon dioxide, along with collaborative research with Nebraska Oil and Gas Conservation Commission, that I'm afforded the commission's position, I will be an asset to the state. Thank you.

BOSTELMAN: Great. Thank you. Thank you, Mr. Strommen. Are there any questions from committee members? Senator Cavanaugh.

J. CAVANAUGH: Thank you, Chairman Bostelman. Thank you, Mr.-- is it Strommen?

PAUL STROMMEN: Strommen. Yes.

J. CAVANAUGH: Thank you for this, answer a lot of questions. In terms of that enhanced oil recovery, does that then that carbon they injected get sequestered there? Or is the--

PAUL STROMMEN: It would be sequestered there, yes.

J. CAVANAUGH: And this is a new appointment. You're not being reappointed, right?

PAUL STROMMEN: That is correct.

J. CAVANAUGH: OK. I was just checking.

PAUL STROMMEN: I'm still learning as I go. So we've-- I've sat in on two meetings so far.

J. CAVANAUGH: But kind of to your point, the part about the carbon capture and sequestration is a new function of the board anyway.

PAUL STROMMEN: Yes.

J. CAVANAUGH: And but you come from an industry that you have some experience in that field, or this is a personal interest, I guess it would--

PAUL STROMMEN: For the past three years, we have-- the company I'm with has been researching carbon sequestration, so I've delved as much as I can into it over the past three-year period. Yes.

J. CAVANAUGH: And have you-- and looked at the proposed regulations that are being created by the committee?

PAUL STROMMEN: Yes.

J. CAVANAUGH: Do you have any thoughts or comments you want to share on that?

PAUL STROMMEN: I think that, I think that the issue that we'll run into with LB650-- not with LB650, but I think one of the problems currently is the monetization of sequestration. Right now you've got 45Q, which is tax incentive for people to sequester CO2. I think that if there was a more fungible carbon credit system that people would be more inclined to get involved in the sequestration process. Because right now you're looking at a, you know, you're looking to work with the EPA, you're looking at somewhere between three and five years before you're actually have completed a sequestration project. And you're looking multimillion, \$100 million project, close to that, maybe a \$50 million project. So you're looking at a high number to actually get to that end point. So people want to make sure that they're being monetized for that. And I think that that's, that's the issue.

J. CAVANAUGH: When you say completed, you mean begin-- get to the point where you can begin injecting?

PAUL STROMMEN: From the minute you start and doing your due diligence to the minute you begin injecting. And then when you get an injection point, you're still being-- you still have to monitor that site. So at any point in time after you monitor that site, the EPA decides that they want to shut you down, they can shut down. That becomes, yeah, it becomes problematic as well. So I think if there were more safeguards for people that get involved in the process, I think it would be helpful.

J. CAVANAUGH: Got you. Thank you.

PAUL STROMMEN: Yeah.

BOSTELMAN: Senator Hughes.

HUGHES: Thank you, Chairman Bostelman. Thank you, Mr. Strommen, for your willingness to serve. So I'm assuming that your company that you work for, is that the one that owns the ethanol plant in Madrid, Nebraska?

PAUL STROMMEN: Yes, Madrid, Nebraska.

HUGHES: So are they looking out of sites to sequest--

PAUL STROMMEN: Yes.

HUGHES: Sequestration in that area?

PAUL STROMMEN: Correct? We are down in Madrid. Yes.

HUGHES: OK. Have you drilled any holes or [INAUDIBLE]?

PAUL STROMMEN: We haven't--

HUGHES: -- gotten that far yet?

PAUL STROMMEN: We haven't drilled any holes. The only, the only hole that been drilled and cased in the state of Nebraska is KAAPA Ethanol. They are the only company that has drilled and cased and they, my understanding is that they are in the process of pulling a core sample to find out what the porosity is and how available that site is for them to sequester. Most of the companies that are looking to get involved in this process right now are kind of in the beginning phase, geo-- during the geological studies. So surface geology as of right now.

HUGHES: OK. I was just curious, I'm from Venango.

PAUL STROMMEN: OK.

HUGHES: So I've had contact with some of my friends from Madrid that said, you know, you're, you were looking for 20 acres to build an injection site to--

PAUL STROMMEN: Yes.

HUGHES: --to inject. And they weren't sure what they thought about that.

PAUL STROMMEN: We've gone as far as seismic, which I think is where most people have gotten to. Like I said, the only ones that have financed a drilling of a hole are KAAPA so far so.

HUGHES: So what's-- what kind of depth are you looking at in that area?

PAUL STROMMEN: I think it's 3,500 feet, if I remember correctly.

HUGHES: OK. That's, that's the top from there down or that's kind of the--

PAUL STROMMEN: Yes.

HUGHES: -- range? OK. Thank you for your willingness to serve.

BOSTELMAN: Senator Moser.

MOSER: I think that Senator Hughes just asked the question I was going to ask, the, the depth of the strata that probably would absorb this CO2 is what, 3,200 feet?

PAUL STROMMEN: So you would drill down to about 3,500 feet. I think you're looking for a cavern that's about 100 feet. And then the way, the way it works is you want a cavern about 100 feet in depth. But then that's going to spread out, right? So they call it a plume, a CO2 plume. And depending upon the porosity and where you're drilling, we're looking at sort of a 16, 16-- no, 6,500 acre plume. So you're looking at a 16-mile circumference is basically what you're looking at.

MOSER: So somebody comes along and drills an oil well in that area, would they possibly vent your CO2 to the world, maybe?

PAUL STROMMEN: No. So there's actually in LB650, they speak to that. And part of, part of what is stated is, is it really has to do with the mineral rights and how those mineral rights shares are placed out with the surface area rights. I'm still trying to get a better handle on it myself. But my understanding is that if you were to try and extract minerals from a depth below where you have sequestered that CO2, that they can drill through that CO2 without the possibility of that CO2 escaping.

MOSER: So the, the depth that you might find oil would be lower than 3,200 feet or 3,400 feet?

PAUL STROMMEN: Feasibly, yes.

MOSER: Because I mean, you drill for oil, you drill as deep as you can before you hit bedrock usually and-- or I guess you look as you drill and see what you're-- what the circulation brings to the top, you have to sort through it all and figure out what it, what-- whether there are any minerals there?

PAUL STROMMEN: Right. Correct.

MOSER: Thank you.

BOSTELMAN: Senator Gragert.

GRAGERT: Thank you, Chairman. I was just-- and thank you for your testimony. I was just wondering, like the liquefied carbon dioxide, is there any-- is that considered hazard-- hazardous material as it goes through a pipeline?

PAUL STROMMEN: It's corrosive.

GRAGERT: It's corrosive?

PAUL STROMMEN: So you would be looking at stainless steel. It would be like any other corrosive, gasoline, naphthas. Yeah, it's, it's a corrosive material so. That's why you, you couldn't send it through a carbon steel pipeline, you would have to send it through a [INAUDIBLE].

GRAGERT: What is the most hazardous part about transferring this liquid carbon dioxide across? Now is your, is your plant right there directly? You won't be pipelining?

PAUL STROMMEN: We won't be pipelining it. If we were, if we were to sequester, and most of the plants that would be in a position to sequester will be doing it on site. And when I say on site, I would say within two miles of where, where they actually compress the gas. So you would most likely compress the gas on site, so at the ethanol plant or at the power plant. NPPD would do it on site, something along those lines. And then you would pipe that as close as you possibly could, because pipelines aren't cheap, even if you're doing a two-inch or a four-inch pipeline, it's not inexpensive. You would try and get that as close as you could to your facility and then you would have the injection well.

GRAGERT: Are you looking at to accept other liquefied carbon dioxide into your area?

PAUL STROMMEN: We've looked at that. I think that that would be smart. I mean, if someone went out there, sort of like with tall grass does with their natural gas caverns just north of Sidney. I think that if you had, if you had a large enough area, if you were able to find a large enough area where you could sequester multiple facilities, then you would, you know, be able to set up a storage cavern. So if someone were to go out there and research that and find the proper property to do that, that would definitely be a benefit. But then you would have to run a pipeline there, you'd have to be able to affix to multiple ethanol and power plants. So I mean, that would be a, that would be a fairly large undertaking, but it would be a pretty impressive undertaking if someone were willing to do it.

GRAGERT: OK, thanks a lot.

PAUL STROMMEN: Yeah.

BOSTELMAN: Are you filling a certain position on the commission?

PAUL STROMMEN: I'm replacing-- and I can't remember--

: Thomas Oliver.

PAUL STROMMEN: -- Thomas Olliver's position.

BOSTELMAN: Are you-- but some commissions, some boards will have an accountant, an engineer, you know, along those lines. Is there a certain area that you're filling?

PAUL STROMMEN: Stan had asked that I kind of focus a lot of my time on CO2. So as much as I'll be working with the others on gas and oil, I'll be spending a good deal of time on CO2 as well.

BOSTELMAN: OK. All right. Any other questions? Seeing none, thank you for coming in today.

PAUL STROMMEN: Thank you.

BOSTELMAN: I appreciate your testimony and your willingness to serve on the, on the commission. So with that, I would ask anyone who would like to testify as a proponent for Paul Strommen to the Nebraska Oil and Gas Conservation Commission, please step forward. Good afternoon.

ANDREW DUNKLEY: Good afternoon. Chairman Bostelman and members of the Natural Resources Committee, my name is Andrew Dunkley, A-n-d-r-e-w D-u-n-k-l-e-y, I'm the director of state governmental relations with the Nebraska Farm Bureau. I'm here today to testify in support of the appointments of Dallen Juelfs and Paul Strommen to the Nebraska Oil and Gas Conservation Commission. In an industry that is nearly as vital to the country's success as agriculture, it is important to have public servants who put a premium on taking all stakeholders and constituents into account. The agricultural industry and the oil and natural gas industry have been closely aligned for decades as the relationship between energy exploration companies and landowners has evolved. And you've, you've heard from, from both of them earlier on how that is evolving at an alarming rate. Not alarming, but at a great rate here in the state, as CO2 sequestration becomes more and more of a reality. As representatives of farmers and ranchers throughout the state and for the state's largest industry, we strive to develop relationships with regulators so the needs of our producers are always kept in mind during rulemaking processes. Because of the thoughtful approach taken by Mr. Juelfs and Mr. Strommen, we support their appointment to the NOGCC. Thank you for your consideration, I'm happy to answer any questions.

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

ANDREW DUNKLEY: Thank you.

BOSTELMAN: Any other proponents? Please step forward. Anyone like to testify in opposition? Seeing none, anyone like to testify in the neutral capacity? Seeing none, that will close our hearing on the appointment of Mr. Paul Strommen to the Nebraska Oil and Gas Conservation Commission. Thank you for coming today, that ends our hearing. Thank you. We will go into exec.