South Dakota Public Utilities Commission
EL18-003- In the Matter of the Application by Dakota Range I, LLC and Dakota Range II, LLC for a Permit of a Wind Energy Facility in Grant County and Codington County, South Dakota, for the Dakota Range Wind Project- Evidentiary Hearing June 13, 2018, 8:00 a.m.
Room 413, State Capitol Building, Pierre, SD
Please Print Legibly


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THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA
 IN THE MATTER OF THE APPLICATION EL18-003 BY DAKOTA RANGE I, LLC AND DAKOTA RANGE II, LLC FOR A PERMIT
OF A WIND ENERGY FACILITY IN GRANT COUNTY AND CODINGTON COUNTY, SOUTH DAKOTA, FOR THE DAKOTA ORIGINAL RANGE WIND PROJECT

Transcript of Hearing
Volume II, Pages 122-375
June 13, 2018

BEFORE THE PUBLIC UTILITIES COMMISSION,
KRISTIE FIEGEN, CHAIRWOMAN
GARY HANSON, VICE CHAIRMAN
CHRIS NELSON, COMMISSIONER
COMMISSION STAFF
Karen Cremer
Adam de Hueck
Greg Rislov
Jon Thurber
Darren Kearney
Katlyn Gustafson

## APPEARANCES

Mollie Smith and Lisa Agrimonti, appearing on behalf of Dakota Range.

Kristen Edwards and Amanda Reiss, appearing on behalf of Public Utilities Commission Staff.

Teresa Kaaz, appearing pro se.

Kristi Mogen, appearing pro se.

Reported By Cheri McComsey Wittler, RPR, CRR Precision Reporting, 213 S. Main, Onida, South Dakota

The following transcript of proceedings was held in the above-entitled matter at the South Dakota State Capitol Building, 500 East Capitol Avenue, Pierre, South Dakota, on the 13th day of June, 2018, commencing at 8:30 a.m.


| APPLICANT EXHIBITS | M | 0 | R |
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| A2 - Mark Roberts Direct | 2 | 15 | 15 |
| A2-1 - Statement of Qualifications | 2 | 15 | 15 |
| A2-2 - Australian National Health and Medical Research Council (2010) | 2 | 15 | 15 |
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| A2-3 - ANSES (2017) Opinion | 2 | 15 | 15 |
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| A11 - Moyer Rebuttal | 2 | 15 | 15 |
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MS. CREMER: Good morning, everyone. We're on day two, and $I$ will call the hearing back to order in Docket EL18-003, in the matter of a permit for the Dakota Range Wind Farm.

When we recessed, excuse me, last night we were in the midst of the direct case of Dakota Range. At this time I'll ask Dakota Range to call their next witness or take whatever action they wish.

MS. AGRIMONTI: Good morning, Commissioners. I am responding to some questions yesterday with respect to outreach by Dakota Range to Ms. Kaaz for a lease agreement. And we have a witness we would like to call, Mr. David Lau, and we can either do that now or in rebuttal, whichever the Commission prefers.

CHAIRWOMAN FIEGEN: Now.
MS. AGRIMONTI: Thank you. Dakota Range would call Mr. David Lau.

> David Lau,
called as a witness, being first duly sworn in the above cause, testified under oath as follows:

## DIRECT EXAMINATION

BY MS. AGRIMONTI:
Q. Good morning, Mr. Lau. Could you please introduce yourself to the Commission.
A. David Lau.
Q. And where do you live in relationship to the project area?
A. South of the project in Watertown, South Dakota.
Q. And how far is that from the project?
A. From the edge of the project, probably 15 miles.
Q. Do you own any property in the project area?
A. Yes.
Q. And is your business also in the project area?
A. Yes.
Q. All right. What role do you have with Dakota Range?
A. I'm a land agent.
Q. And how long have you had that role?
A. A little over two years.
Q. Are you aware that the Commission asked questions yesterday about whether a lease agreement had been offered to Ms. Kaaz?
A. Yes.
Q. As part of your job responsibilities with Dakota Range, did you personally contact Ms. Kaaz?
A. Yes.
Q. Please describe the contacts that Dakota Range had with Ms. Kaaz, including your own.
A. I spoke with Ms. Kaaz on the $23 r d$ of February, talked to her on the phone for about a half-hour, discussing her issues with the wind farm and discussion
about being in a lease.
She agreed to meet with me the following week. I called her that following Monday and asked if she would want to meet, and she didn't give me any time to meet. She didn't have any time.

I followed up with another phone call, spoke to her, spoke to Danny, and they said they were not interested or comfortable speaking with me or going into a lease.
Q. Is Danny Mr. Kaaz?
A. Correct.
Q. What were some of the concerns that Ms. Kaaz raised?
A. Mainly setbacks.
Q. Okay. Would Dakota Range still be willing to enter into a wind lease agreement with the cause family?
A. Yes, we would. We'd go into what we call a good neighbor agreement, which is an agreement that we put her into the wind farm and that she would have no facilities or income on her property.

MS. AGRIMONTI: Thank you. I have no more direct questions for Mr. Lau.

MS. EDWARDS: Because we were unprepared for this witness, could we have five minutes to prepare with our analyst?

MS. CREMER: Certainly. We'll be in recess for five minutes.
(A short recess is taken.)
MS. CREMER: All right. We'll go back into session.

Staff.

## CROSS-EXAMINATION

BY MS. EDWARDS:
Q. Good morning. So what you are willing to offer

Ms. Kaaz right now is the good neighbor agreement; correct?
A. Correct.
Q. To your knowledge, is there anything about the good neighbor agreement that would prevent Ms. Kaaz from airing her concerns here today?
A. Repeat the question.
Q. Is there anything about that good neighbor
agreement, any clause in there, that would prevent her
from airing her concerns before the Commission today?
A. No.
Q. Or at a later date?
A. No.
Q. And you testified that you approached her on

February 23?
A. Correct.
Q. Was that of this year?
A. Yes.
Q. Is there a reason she wasn't contacted prior to this docket being filed?
A. She had been contacted prior to that. At our Conditional Use Permit for Codington County Nate Pedder had spoke to her at that hearing after that.

And had actually been called after that with a follow-up call.
Q. Was she ever offered a lease before the February 23 date?
A. I couldn't say for sure. It had been talked about. Nate Pedder had contacted her.
Q. Talked about with who? Like Ms. Kaaz?
A. Correct.

MS. EDWARDS: Okay. No further questions.
Thank you.
MS. CREMER: Thank you.
Ms. Kaaz, did you have any questions?
MS. KAAZ: I just have one.
CROSS-EXAMINATION
BY MS. KAAZ:
Q. Have you ever talked to me about my property values on a phone conversation?
A. No.

MS. KAAZ: That's the only question.
MS. CREMER: Thank you.

Ms. Mogen.
MS. MOGEN: I have no questions.
MS. CREMER: Commissioners.
COMMISSIONER HANSON: Hi. Gary Hanson. Thank you very much for being here, Mr. Lau. Appreciate your testimony.

Can you tell me -- what can you tell us about the good neighborhood [sic] agreement?

THE WITNESS: It's an agreement that --
COMMISSIONER HANSON: I don't want you to get into anything that you think is confidential.

THE WITNESS: I'll -- it's an agreement that we offer people if they don't want to be into a full on lease, they don't want to be -- have any facilities or cabling across their property. We can put them in. They're still in the project. They get a payment for being in the project.

COMMISSIONER HANSON: Okay. Thank you.
You said -- I believe you said you have a
business close to the project area; is that correct?
THE WITNESS: Correct.
COMMISSIONER HANSON: Can you share with us, is that an ag business? Can you tell us what type of business?

THE WITNESS: It was a mechanic shop.

COMMISSIONER HANSON: Okay. And how close is that to the project?

THE WITNESS: In the project.
COMMISSIONER HANSON: In the project.
THE WITNESS: Yep.
COMMISSIONER HANSON: Okay. Thank you very
much. Appreciate your testimony.
COMMISSIONER NELSON: Thank you for being here.
So my understanding is that you are the witness that the company has brought here to help us understand the contacts between the company and Ms. Kaaz; is that correct?

THE WITNESS: Correct.
COMMISSIONER NELSON: But yet you can't tell us whether or not she was offered an agreement prior to February 23?

THE WITNESS: Not accurately.
COMMISSIONER NELSON: The good neighbor agreement, the payments that you mentioned, are those annual payments or one-time payments?

THE WITNESS: Annual payments. And for someone like Ms. Kaaz with a 15-acre acreage what would the annual payment be?

MS. AGRIMONTI: Commissioner, I think that that may be confidential. The compensation to the landowners
with that kind of breakdown is not something that's shared publicly.

COMMISSIONER NELSON: And would you be willing to file that confidentially?

MS. AGRIMONTI: Yes, Commissioner. We can do
that.
COMMISSIONER NELSON: Thank you.
I have no further questions. Thank you.
MS. CREMER: Do you have any redirect?
MS. AGRIMONTI: Yes, I do. Thank you for the opportunity.

## REDIRECT EXAMINATION

BY MS. AGRIMONTI:
Q. Mr. Lau, after the hearing yesterday did you reach out to the company to try to understand all the contacts with Ms. Kaaz?
A. After yesterday?
Q. After the hearing yesterday.
A. Did I reach out to Mrs. Kaaz?
Q. No, sir. Did you investigate the company's contacts with Ms. Kaaz?
A. Yes, I did.
Q. And when you came here today was it your intent to speak only to those matters which you had personal
knowledge?
A. I can speak of other things, I guess, but what I know of for factual, that's what $I$ brought to the table. MS. AGRIMONTI: Thank you. That's all I have. MS. CREMER: Staff, do you have any redirect based on that?

MS. EDWARDS: No.
MS. CREMER: I meant recross.
Ms. Mogen, did you, based on that?
MS. MOGEN: I do.

## RECROSS-EXAMINATION

BY MS. MOGEN:
Q. Commissioner Nelson $I$ think brought up the good neighbor agreement and the payment.

Can we, besides just what a payment would be, have a good neighbor agreement, even if it's confidential, filed with the PUC with the payments?

MS. AGRIMONTI: I'm not entirely sure what
Ms. Mogen would want with a confidential agreement because we don't have an agreement regarding confidentiality in this docket. So $\quad$ would initially not be willing to voluntarily supply that.

MS. MOGEN: Let me clarify.
I would like to know if the PUC could have a good neighbor contract filed with them even if it is confidential and the public doesn't get to see it.

MS. EDWARDS: Could Staff weigh in?
MS. CREMER: We'll let the company, and then you can, yes.

MS. AGRIMONTI: I'm sorry. If there's a request from the Commission for that agreement, we can file that confidentially.

MS. CREMER: And then Staff.
MS. EDWARDS: I guess we'd be interested to see it simply because it's not clear to us what the purpose is. If they're not getting any facilities and they can still complain and -- I don't know what it would be then.

MS. CREMER: I guess then, Dakota Range, if you would file -- and $I$ believe is it A20?

MS. AGRIMONTI: That would be the next number.
MS. CREMER: Yes. That would be.
Thank you.
And then, Ms. Mogen, did you have any further recross?

MS. MOGEN: One moment.
Q. (BY MS. MOGEN) Yesterday we heard that there's no health and safety issues. Why is a good neighbor agreement necessary then?

MS. AGRIMONTI: I'm going to object. Sorry. I'm going to object. Out of scope.

MS. CREMER: And I'm going to sustain that
objection. But you can -- that doesn't preclude you from asking another question.

MS. MOGEN: I'm finished. Thank you.
MS. CREMER: Okay. Ms. Kaaz, did you have any
further recross?
MS. KAAZ: I don't believe so at this time.
MS. CREMER: Okay. Thank you. I think then --
MS. AGRIMONTI: Thank you. That's all I have.
MS. CREMER: All right. You may step down.
Thank you.
(The witness is excused.)
MS. AGRIMONTI: Dakota Range would call
Wade Falk.
Wade Falk,
called as a witness, being first duly sworn in the above cause, testified under oath as follows:

DIRECT EXAMINATION
BY MS. AGRIMONTI:
Q. Good morning, Mr. Falk.
A. Good morning.
Q. Would you please introduce yourself to the Commission.
A. My name is Wade Falk. I'm a landowner in the project, and my family farms in the project. My parents and my brother and $I$ and my sister own land in the
project.
Q. Did you file Prefiled Direct Testimony in this matter?
A. No.
Q. Did you file Prefiled Rebuttal Testimony on May 21, 2018?
A. No. I don't think so.
Q. Let me ask it a different way.

Did you file Rebuttal Testimony in this hearing, written testimony for this proceeding, on or about May 21?
A. Yes.
Q. And is your Rebuttal Testimony Exhibit A12? And if you need to look in the binders there, you can look. CHAIRWOMAN FIEGEN: These lawyers.
A. Yeah. Except -- okay. May 12.
Q. What may seem regular practice to us is new to others.
A. And how far back is that? Someone may have to show me where A12 is.

MS. AGRIMONTI: May I approach? Oh.
A. I see A2. Wrong binder?

CHAIRWOMAN FIEGEN: I am just so thankful you're here today. And I know there's lots of legal issues, but we'll help you all get through it.
A. Thank you.
Q. All right. Mr. Lau [sic], I'll ask the question again now that you have it in front of you.

I'm sorry. Mr. Falk. Thank you. And it's only 8:48.

Okay. Is your Rebuttal Testimony presented as Exhibit A12?
A. Yes.
Q. All right. You mentioned that your family farms, and you're in the project area. Are you individually a participating landowner in the project?
A. Individually, no. As in Falk Farms, Incorporated, my family farm, my parents, my brother, and I are all -and my sister are all shareholders of the larger family farm.

So in that sense, yes. My personal land that's just under my name alone is not in the project area.
Q. All right. And how much land has the family farm signed up with Dakota Range?
A. You know, I didn't get an actual number, but $I$ think it's like 10 or 12 quarters.
Q. Why did the family farm decide to participate in the Dakota Range project?
A. Oh, it's a great project. Of course -- I wouldn't say that's why, but the added income to the farming
community would be great right now. Not that it isn't always. The project is good for the community.

There's not a whole lot of other large businesses coming into the community that create jobs and income and tax base. And I guess you've heard it all before. But it's a great project.
Q. All right. What is your relationship like with

Dakota Range, the project developer?
A. It's been good. Good. Gone to a lot of the meetings. Like I said, we're -- we've signed on so we've visited with them quite a bit.
Q. Okay. Are you personally satisfied with the lease and that it adequately protects your land?
A. Yeah. And $I$ would say that would go for any of the landowners if you were one of the landowners that signed on. There's been like 50 or 60 landowners that signed on. If you weren't happy with the lease, you shouldn't have signed it.
Q. Would you -- if I asked you the questions that are in your prefiled testimony today, would your answers be the same?
A. My prefiled testimony?
Q. That's that Exhibit 12 .
A. Yeah.
Q. It's another way of asking would you have any
changes to your testimony as you sit here today?
A. No. I might add.
Q. No. But your answers would be the same?
A. Yeah.

MS. AGRIMONTI: All right. Mr. Falk is available for cross-examination.

MS. CREMER: Thank you.
Staff.

## CROSS-EXAMINATION

BY MS. REISS:
Q. Thank you, Mr. Falk. Your testimony indicates that your residence is in Stockholm, South Dakota; is that correct?
A. Yep. Two miles east and two miles north of Stockholm, South Dakota in Grant County.
Q. Okay. What's the approximate distance from your residence to the closest proposed wind turbine?
A. It's probably -- in this? There's another wind farm that has them on like my private land right there. But this one it would be probably -- probably 8 miles. So the land that $I$-- the farm where $I$ grew up is in the project.
Q. But your residence is 8 miles away from the project?
A. Yeah.
Q. From the closest turbine; is that correct?
A. Right.
Q. Are there any proposed wind turbines hosted on your property?
A. On my property?
Q. Your property.
A. On my personal property, yes. But not with this. Not with Dakota Range.
Q. So there are no turbines associated with the Dakota Range project on your property; correct?
A. Okay. As in my property, as in my personal property?
Q. No. Sir -- sir, can you please answer the question? MS. AGRIMONTI: If I might ask, I believe that the question is confusing to the witness because he has his property, which he attributes to his family farm, and then he has individual property. And I just think that's why there's some disconnect here.

MS. CREMER: And I would ask --
MS. REISS: Can I clarify?
MS. CREMER: Yes. Either refer to it as the family farm or his personal farm. I think that would clear it up.
Q. On your personal farm.
A. Well, the family farm is quite personal to me also. So I'm going to say yes.
Q. How far away from the closest proposed wind turbine -- how far is that from your personal property, not the family farm?
A. Not Falk Farms?

From the Dakota Range one? I guess I don't know. Probably 6 or 8 miles.
Q. Okay. Are those -- are you aware of whether those turbines are alternates?
A. Are alternates or --
Q. Or firmly set turbines?
A. Firmly set.

MS. REISS: No further questions.
MS. CREMER: Ms. Mogen.
CROSS-EXAMINATION

BY MS. MOGEN:
Q. Mr. Falk, when you signed your contract did you know that the wind turbines might affect the bottom line of some ag producers in the community?

MS. AGRIMONTI: Objection. Assumes facts not in evidence.

MS. CREMER: Do you want to maybe -- can you lay
a little foundation with your question with him?
Q. Yesterday -- I can't remember. The Fish and Game -Kirschenmann had discussed honey bees and the species being impacted by turbines. And he discussed the species
would die. And South Dakota is No. 2 in honey production in the United States.

MS. AGRIMONTI: Objection. Mischaracterizes
Mr. Kirschenmann's testimony.
MS. CREMER: Yeah. I think the problem is -have you heard Mr. Kirschenmann's testimony, Mr. Falk?

THE WITNESS: I walked in right towards the end.
MS. CREMER: Okay. I guess the debate I'm
having is he is a landowner here to discuss, you know, his property, and I'm not sure this is his area of expertise.

So I'm going to sustain the objection, but you may continue to ask questions.

MS. MOGEN: Thank you.
Q. Falk Farms owns property approximately one mile from my home.
A. Yep.
Q. Will you allow me to use it every day for 15 to 30
minutes for 50 years in any manner that $I$ choose?
MS. AGRIMONTI: Objection. Relevance.
MS. CREMER: I'm going to sustain that.
You can ask another question.
Q. So I take it you are okay with removing some South Dakota ag land from production forever?
A. So the ag land that you must be talking about that
we -- like what we signed on, sure. There would be a little strip of road going out to facilities. The land right underneath the tower itself, yeah, that would probably be out of production maybe forever.

If we're going to look at ways to make energy, I don't know how you could do it with less. If you -- what the other option would be if we go without energy or -you'd be talking strip farming or coal mining. You know, strip farm -- strip mining for coal. This would be considerably less.
Q. Can strip mining for coal be reclaimed?
A. I suppose it could. It would be a different -- a different elevation because they've taken the mountain out from underneath, but sure it could. And I'm sure the base of a wind turbine, if it was not used, it could be reclaimed also.
Q. Is the base going to be removed from your property?

MS. AGRIMONTI: Objection. Vague.
A. I'm not sure that $I$ know the answer to that.

MS. AGRIMONTI: I'm sorry. Again, it's your property, and $I$ think that we've established with respect to Dakota Range there is no turbine on the family farm property.

THE WITNESS: Yeah. Unfortunately, no. We signed up to have them, but nothing fit.

MS. MOGEN: I'm finished. Thank you.
MS. CREMER: Ms. Kaaz.
MS. KAAZ: I do have one.

## CROSS-EXAMINATION

BY MS. KAAZ:
Q. When you stated the benefits would support the community how does that affect me?
A. You particularly?

So I read in here that you went to Revillo school.
I mean, it's too bad it wasn't a little quicker. Revillo school was closed because there were no children there, because there's no business coming in. It would be that sort of thing.

So you live now in the Waverly-South Shore School District. Think of the taxes brought into the Waverly School District. In all the land in all the school districts we own the Waverly School District has the highest taxes for the schools. And, you know, it's -this would -- so apparently they need it. This would definitely help with roads.

You live on a county road; right? Are you on a county road, or are you on a township --
Q. No. I'm on a township road.
A. Okay. How it would help you?

Yeah. It would help you as far as improving the
whole community. Tax base, money for roads, township roads exactly. They've signed -- if they use it, they'll make them better. They'll make sure they are not harmed because it would be bad publicity. Jobs. New jobs closer to home.

I know you're -- I think I can say that. I know your husband works clear in North Dakota. He could have a job closer to home.
Q. You should be our financial advisor.
A. No, thank you.

MS. CREMER: Did you have anymore questions,
Ms. Kaaz?
MS. KAAZ: No. I have no more questions, I don't think.

MS. CREMER: Thank you.
Commissioner Nelson.
COMMISSIONER NELSON: Thank you. And thanks for being here today.

Of the 72 turbine locations for Dakota Range, what is the closest turbine location to Falk Farms, Incorporated property?

THE WITNESS: I would have to think there would have to be some right across the road. I'd have to -- if we had a big map, $I$ could point them out to you.

COMMISSIONER NELSON: Well, I'm looking at a map
and to me it looks like it's probably three miles away but $I$ may be missing something. But it looks like we're going to get a map, and you can help me out.

MS. AGRIMONTI: I'm showing the witness what's marked as Exhibit A15-3.

THE WITNESS: A15-3. And the turbines are -which ones are the turbines? Are the turbines the little Xs?

MS. AGRIMONTI: Yes, they are.
THE WITNESS: That's a map.
So I grew up right here on the Codington-Grant County line. So we own land here, here. If I'm in the right spot -- what is this? Oh, that's the project. Sure. (Indicating).

We own land here. Here, here, here. We own land right here, which that would be, you know, kitty-corner a mile across, kitty-corner across the road. (Indicating).

COMMISSIONER NELSON: Okay. So the 72 proposed turbines are the blue Xs. Show me where the closest blue X -- the closest blue is -- hold it right side up. There we go.

The closest blue is to your property.
THE WITNESS: Okay. Here we go again.
MS. AGRIMONTI: Yeah. Let's let the record
reflect now we're looking at a different map. It's Exhibit A15-4. And the turbines are numbered, Mr. Falk, so you can identify the turbine by number.

THE WITNESS: Closest to our property?
I'm trying to look for -- this must be Old
Highway 81, I'm going to say. So, again -- if this is Old Highway 81, which I'm assuming it is, that's where $I$ grew up. (Indicating).

Okay. So there's one there, which is five miles away. No. We're closer than that because we're not that far from Highway 81.

Yeah. That's right. I suppose it's five miles to No. 13. But if I'm in the right spot here, we have land here, which would be -- if I'm in the right spot, which I believe I am -- sure. There's the Indian River, which continues on to the Sioux. (Indicating.) So we would be --

COMMISSIONER NELSON: That's not a blue dot.
THE WITNESS: That's not blue. What is --
COMMISSIONER NELSON: Those are alternates.
THE WITNESS: Okay. So I'm looking at the
alternate one. So it would be three miles from -- that's not it either. From 12 approximately. Maybe four.

COMMISSIONER NELSON: Thank you.
I have no further questions.

MS. CREMER: Thank you.
Commissioner -- or Chair Fiegen.
CHAIRWOMAN FIEGEN: Thank you so much for coming to our State Capitol today.

Mr. Falk, you talked about that this is a good thing for your family, your corporate family group.

THE WITNESS: Yeah.
CHAIRWOMAN FIEGEN: Did you hire an attorney to look at the lease to ensure that this was a good thing for your corporate family farm?

Did you have an attorney?
THE WITNESS: No. Really didn't. We read it over ourselves, $I$ guess in a way kind of trusting that way, trust the people we're working with.

CHAIRWOMAN FIEGEN: Okay. No further questions.
MS. CREMER: Thank you.
Commissioner Hanson.
COMMISSIONER HANSON: Thank you. Excuse me if my questions are redundant. I overheard Commissioner, Chair Fiegen, ask a question about an attorney as $I$ was conferring with another Commissioner.

I think we've established that you're not an attorney.

THE WITNESS: No.
COMMISSIONER HANSON: And did Commissioner

Fiegen ask if you consulted with an attorney, I believe? THE WITNESS: Yes. She just did.

COMMISSIONER HANSON: And your answer was?
THE WITNESS: No.
COMMISSIONER HANSON: How did you arrive at your statement then regarding your lease with Dakota Range, "Do you feel the lease adequately protects your property and your interests," and your testimony is yes?

THE WITNESS: Yes. Just from reading it over myself. And, you know -- and my family's read it over and everybody's on the same page, which if you can get that, you're doing great.

COMMISSIONER HANSON: Yes. That's true.
Just out of curiosity, $I$ believe in your testimony you stated you lived on the -- or your family has lived on the property for five generations.

THE WITNESS: Yep.
COMMISSIONER HANSON: That's a lot of history there. So I assume that you're intimately familiar with the area.

Do you know if there's any gravel pits in the area?

THE WITNESS: Oh, yes.
COMMISSIONER HANSON: And is there reclamation practices that take place with those gravel pits?

THE WITNESS: Probably not as good as they should be.

COMMISSIONER HANSON: Well, that was going to be one of my questions.

Just wondering, in your experience as a landowner in that area, gravel pits are certainly -create far more disturbance with a property than about anything else.

THE WITNESS: Right.
COMMISSIONER HANSON: Have those -- in your experience, have they been successful in reclamation once --

THE WITNESS: Really not in the past. I think they will be now. I mean, I think people are doing a better job of that sort of thing now. You know, in fields here, there, everywhere you'll see a little gravel pit, you know, from -- all grown up to trees and mess and --

COMMISSIONER HANSON: So would it be safe to say that your answer is reflecting the fact that there hasn't been really an effort towards reclamation but where there has been reclamation -- and $I$ don't want to answer this question for you. I just want you to tell me whether it's fact or not.

Has reclamation been successful where there has
been an effort towards reclamation?
THE WITNESS: You know, I can't say that $I$ can answer that. Because the old ones weren't really reclaimed, and the newer ones are still being used.

COMMISSIONER HANSON: Okay. That's fair. Thank you very much. Appreciate that.

Thank you.
COMMISSIONER NELSON: If I could ask one more question.

THE WITNESS: Sure.
COMMISSIONER NELSON: If the company had proposed to put turbines on Falk Family, Incorporated property, would you prefer to have those on crop ground or on pasture ground?

THE WITNESS: I would prefer to have them on pasture ground.

COMMISSIONER NELSON: Thank you.
THE WITNESS: Just for the sake of farming around them. But we'd be glad to have them on either one but they --

MS. CREMER: And then, Dakota Range, did you have any redirect?

MS. AGRIMONTI: I do not.
MS. CREMER: Staff, based on Commission questions, do you have any recross?

MS. REISS: Yes. Just briefly, please.
RECROSS-EXAMINATION
BY MS. REISS:
Q. Mr. Falk, is the family farm mainly cultivated or grassland?
A. Both. Mainly cultivated, but there's quite a bit of pasture involved too.
Q. Just based on your estimation, what would be the approximate split between the two?
A. I would say it's like 75 percent farmland.
Q. Okay. Thank you.

And were you given an explanation by Dakota Range on why no turbines would be sited on the family farm?
A. I think due to setbacks. And we have a lot of
irrigated land so there's irrigation systems in the way.
So that's the reason why.
MS. REISS: No further questions. Thank you.
MS. CREMER: Ms. Mogen.
RECROSS-EXAMINATION
BY MS. MOGEN:
Q. Mr. Falk, did you attend the PUC hearing in Waverly?
A. I did, yes.
Q. Did you hear Mark Mauersberger in his presentation talk about the benefits to local schools, tax benefits?
A. I'm sure I did. I don't know that I can remember
exactly who he was. There was like how many people spoke that day? Like 50.
Q. Mark Mauersberger is the project manager for Dakota Range, and he did the presentation at the beginning.
A. Okay.
Q. Okay. Did you hear Jon Meyer, the superintendent of the Waverly School, talk about --
A. I'm sure I did.
Q. Okay.
A. I can't remember what he said or not. I'm sure I did.
Q. Jon Meyer put his comments that night in writing on the PUC website.

MS. MOGEN: I do have a copy of that if anybody needs one.

Can I ask Mr. Falk to read some of that comments?

MS. CREMER: Yes.
MS. AGRIMONTI: May I ask a point of order?
Those comments are not in the record, and we don't have the author here to ask questions of so it would be hearsay.

Is that something that typically comes in the record if there are comments filed in the docket?

MS. CREMER: I believe she's using this for
impeachment purposes. He did discuss the benefits of tax so $I$ will allow it.

MS. AGRIMONTI: I'm sorry. May I respond? The witness said he didn't recall what the author of the comments said. And I guess I would be concerned that if he's going to read things into the record, that that might be taken as substantive evidence.

I'll stand by your ruling.
MS. CREMER: Thank you.
A. Okay. "The revenue estimates for school districts as presented by Apex Clean Energy failed to take into account the reality of Public $K$ through 12 school funding in South Dakota. The revenue estimates they presented assume that public school districts are allowed to keep 100 percent of the tax revenues generated from the wind farms, in addition to the full amount of funding they would be otherwise entitled to receive from the State.
"While that was once the case, the recent changes in K through 12 public education funding laws now estimate the possibility. In short" --

Okay. Then skips down. She's got it marked.
"In short order, for a school district to be able to realize the financial benefit that has been advertised by a company such as Apex Clean Energy, South Dakota would have to drastically revise the public education funding
laws and remove the provisions such as the two described above."

I'm wondering if $I$ should have read the whole thing. MS. MOGEN: I'm fine with that if we want to take the time.

MS. AGRIMONTI: I would object to reading the entire document.

MS. CREMER: Yes. I think we -- you need to now ask questions about that.

Thank you.
Q. After hearing that from a superintendent of schools in our local community, do you still feel that there is a tax benefit to local schools?
A. If they're paying taxes to something in

South Dakota, it's got to trickle down somehow. And I'm sure there's people here that could explain that better than $I$ can.
Q. In Grant County have you heard the chief financial officer, Jason Kettwig, during his campaign in 2016 and beyond state that we do not have enough employees to fill the spaces and the job openings in Milbank at this time?

MS. AGRIMONTI: Objection. Relevance. Hearsay.
MS. CREMER: I would sustain that.
You can ask another question.
MS. MOGEN: I'm finished. Thank you.

MS. CREMER: Thank you.
Ms. Kaaz.
MS. KAAZ: No further questions.
MS. CREMER: Dakota Range, did you have some
final redirect?
MS. AGRIMONTI: No. Thank you, Ms. Cremer. I'm concluded.

MS. CREMER: Thank you. You may step down.
(The witness is excused.)
MS. AGRIMONTI: Dakota Range would call
Alice Moyer.
Alice Moyer,
called as a witness, being first duly sworn in the above cause, testified under oath as follows:

## DIRECT EXAMINATION

BY MS. AGRIMONTI:
Q. Good morning, Ms. Moyer.
A. Morning.
Q. If you could speak close to the mic so it will
amplify your voice for those present.
A. Good morning.
Q. Thank you. Could you please introduce yourself for the Commission?
A. I'm Alice Moyer. 2020 13th Avenue in Watertown is my address.

MS. CREMER: You're going to have to get way closer to that mic. Pull it closer. Whatever you need to do.

Thank you.
A. Okay. I'm Alice Moyer. 2020 13th Avenue, Watertown is my address, but $I$ do own land in Codington County.
Q. How long have you lived at your current address?
A. 15 years.
Q. And were you raised in South Dakota, lived there all your life?
A. Yes.
Q. Did you file Prefiled Rebuttal Testimony in this case on May 21?
A. Yes.
Q. And is that marked as A11?
A. Yes.
Q. You can check the book if you need to.
A. Yes.
Q. All right. Thank you. Are you a participating landowner in the Dakota Range project?
A. Yes, I am.
Q. Please describe the land that is under lease with Dakota Range.
A. Well, it's an acreage in the country. My son farms it.
Q. And how many acres in all?
A. 74 .
Q. Why did you decide to participate in the Dakota Range project?
A. The income. It's revenue.
Q. Were there any other reasons?
A. I think if we can make our own energy, that's got to be progress.
Q. And what is your relationship like with Dakota Range?
A. Very good.
Q. Do you feel that your lease adequately protects you and your land?
A. Yes, I do.
Q. And if $I$ asked you the same questions in your testimony that's in Exhibit 11 -- or A11, would they be the same today?
A. Yes.

MS. AGRIMONTI: Ms. Moyer's available for cross-examination.

MS. CREMER: Thank you.
Staff.
MS. REISS: Thank you.

## CROSS-EXAMINATION

BY MS. REISS:
Q. Ms. Moyer, what is the distance from your residence listed in your testimony to the closest proposed wind turbine?
A. Well, the land, it's about 6,000 feet. A little over a mile.
Q. Okay. How about to your personal residence?
A. I live in Watertown.
Q. So do you have an idea of approximately how far Watertown is from the closest turbine? Or from the farm, the wind facility?
A. Say that again, please.
Q. Do you have an idea -- rough idea of how close your residence is from the closest wind turbine?
A. 14,15 miles.

MS. REISS: Nothing further. Thank you.
MS. CREMER: Ms. Kaaz.

## CROSS-EXAMINATION

BY MS. KAAZ:
Q. I just have one question for you.

Will your farm use the electricity produced by the
Dakota Range project?
A. I hope so at some point.

MS. KAAZ: No further questions.

MS. CREMER: Thank you.
Ms. Mogen.

## CROSS-EXAMINATION

BY MS. MOGEN:
Q. Were you told by Dakota Range about the -- how far flicker can go?
A. When $I$ signed up my land that was not an issue, I guess. I signed it up because I thought it was a good project. I guess there's flickering lights everywhere. I guess I did not worry about it.
Q. Do you know where the energy is going to go from this project? Who benefits from it?

MS. AGRIMONTI: Objection. Compound question.
MS. CREMER: And by that you basically asked her two questions. If you could just break it into -Q. Do you know where the energy -- do you know where the energy from this project will be sent?
A. Yes, I do.
Q. Where?
A. Otter Tail. Otter Tail.
Q. Otter Tail? And then who is it to benefit?
A. Electricity, we get all of our electricity from companies. And so it should benefit everybody.
Q. Are you aware Xcel Energy will be receiving the power?
A. Yes.
Q. Do you know why they are receiving the power?

MS. AGRIMONTI: I'm going to now object to this line of questioning. I let it go for a little bit. It's not relevant. That's my objection.

MS. CREMER: I would sustain that.
You can ask your next question.
MS. MOGEN: I'm finished. Thank you.
MS. CREMER: All right. Thank you.
Commission. Chair Fiegen.
CHAIRWOMAN FIEGEN: Thank you.
Thank you certainly for coming. Were you here yesterday too?

THE WITNESS: Just at the very end.
CHAIRWOMAN FIEGEN: My question is, again, you talk about that this is a good project. Did you hire an attorney to look at the lease to make sure you're --

THE WITNESS: No, I did not. I read it myself
and then $m y$ son read it and we talked about it and trusted the lease was okay.

CHAIRWOMAN FIEGEN: Okay. You talked about this was an acreage? Is that what you said?

THE WITNESS: Yes, it is.
CHAIRWOMAN FIEGEN: Does somebody live there?
THE WITNESS: No.

CHAIRWOMAN FIEGEN: Okay. All right. Thank you.

MS. CREMER: Commissioner Hanson, did you have questions?

COMMISSIONER HANSON: I just want to thank you for being here today. Appreciate it.

THE WITNESS: You're welcome.
COMMISSIONER HANSON: And I'm assuming you're not an electrical engineer.

THE WITNESS: No.
COMMISSIONER HANSON: All right. All right. Well, thanks for being here.

COMMISSIONER NELSON: Wait a minute. I like her attitude. Get me out of this chair. Just a couple of questions.

On the 74 acres is there a residential dwelling on the 74 acres?

THE WITNESS: No. It is farm. Just farmland.
COMMISSIONER NELSON: Thank you. And could you show me where the 74 acres is located on the map that has been presented?

THE WITNESS: I would say this -- it's on this side of the interstate.

MS. AGRIMONTI: If we could take a break for just a minute, $I$ think Mr. Lau could help identify the
property on the land for her. It may expedite things. MS. CREMER: That would be fine.

MS. AGRIMONTI: Thank you.
(Pause.)
MS. CREMER: So we're back on. So go ahead and you can explain to us where your land is.

THE WITNESS: Okay. From Highway 20 you've got to go north about 2 and a half miles. From Highway 20 you go north 2 and a half miles.

COMMISSIONER NELSON: And is it on the west side of the interstate?

THE WITNESS: Yes.
COMMISSIONER NELSON: I'm looking at a land ownership map that was in the Application as Figure 5. Are you familiar -- and I'm not seeing your property listed.

Are you familiar with the surrounding landowners?

THE WITNESS: Some of them, yes.
COMMISSIONER NELSON: Can you give me a name of a surrounding landowner?

Is your property in Codington County or Grant County?

THE WITNESS: Codington. And my son lives right over here in this area. My son lives in this area right
here, $155 t h$ Street (indicating).
COMMISSIONER NELSON: And does your property border 155 th Street?

THE WITNESS: Pardon?
COMMISSIONER NELSON: Do you know what street borders your property?

THE WITNESS: 457th Avenue.
COMMISSIONER NELSON: I apologize for dragging this out, but I'm looking two and a half miles north of Highway 20 on the west side of the Interstate, and I'm not seeing --

THE WITNESS: A mile and a half then, you know. Because our farm is here. You go to this corner and go down here to get to it (indicating).

Okay. You go from 155th Street, that corner, and then you go south. And so actually we're a mile too far.

COMMISSIONER NELSON: Okay. Does your land border the Interstate?

THE WITNESS: Yes.
COMMISSIONER NELSON: Okay. I'm seeing a parcel here that is probably about 74 acres that does not have a name on it, and so $I$ think $I$ see where it is.

Do you know how close the nearest proposed wind turbine is to your property?

THE WITNESS: 6,000 feet. A little over a mile. COMMISSIONER NELSON: Thank you. And I appreciate your patience.

THE WITNESS: Okay.
MS. CREMER: Do you have any redirect, Dakota
Range?
MS. AGRIMONTI: I do not.
MS. CREMER: And, Staff, do you have any recross based on Commission questions?

MS. REISS: No, thank you.
MS. CREMER: Ms. Mogen, do you have any
questions based on Commission questions?
MS. MOGEN: No, thank you.
MS. CREMER: Ms. Kaaz?
MS. KAAZ: No, thank you.
MS. CREMER: Thank you, Ms. Moyer. You may step down, and, Dakota Range, you can call your next witness.

MS. AGRIMONTI: Thank you.
(The witness is excused.)
MS. AGRIMONTI: Dakota Range would call
Mike MaRous.
Michael MaRous,
called as a witness, being first duly sworn in the above cause, testified under oath as follows:

## DIRECT EXAMINATION

BY MS. AGRIMONTI:
Q. Mr. MaRous, $I$ know you were here not that long ago, but would you please introduce yourself to the Commission.
A. Michael S. MaRous.
Q. And what are your experiences and qualifications with respect to real estate valuation?
A. I have been appraising property primarily throughout the Midwest for the past 40 plus years. I've appraised over 12,000 properties of $\$ 15$ billion of value from residential properties to very large acreage to large industrial facilities to retail facilities to large housing facilities, to name a few, and quite a few properties in South Dakota.

And $I$ have the general certified licensure in the State of South Dakota, which is the highest form of real estate appraisal licensure, and I've held the MAI, which is the top real estate appraisal designation, for over 35 years and have published, have taught, have spoken, and have testified in many matters through many circuit and federal courts throughout the Midwest and many public hearings such as this one.
Q. Did you file Prefiled Direct Testimony in this matter on April 6?
A. I did.
Q. Let's try that again. Did you file prefiled on April 6, or did you file -- oh, wait a minute.

MS. AGRIMONTI: May I have just a moment?
Q. Sorry. It's Prefiled Supplemental Direct. I got it. Is it Exhibit A13 and A13-1 through 13-6?
A. Yes.
Q. And did you also file Rebuttal Testimony in this case on May 21?
A. Yes.
Q. And is that A14 with Exhibits A14-1 through A14-5?
A. Yes.
Q. Could you please provide a brief overview of the prefiled testimony that you made in this case?
A. Basically I visited the project area in February of this year and spent about three-quarters of the day viewing the project, viewing existing development, met with David who toured around and just to get to know the area, the lay of the land, the topography, the issues, and observe the existing conditions.

Extensive research was done in regard to economics, demographics, land use, population trends. And as part of this a study was done where I contacted every assessor that had over a 25 -unit wind farm in the counties in the state of South Dakota to see if there had been any tax
appeals filed, to learn that.
I also reviewed peer reviewed articles. I also researched comparable data. As part of this whole process I also reviewed reports, testimony, data that was put together by David Lawrence out of Sioux Falls, another MAI designated appraiser, to review his information, and he provided excellent comparable additional data, which $I$ reviewed.

And, you know, simply looking at all the issues, the benefits, the published studies, the other technical reports, I compiled my conclusions that the proposed development will have no negative impact on real estate values.
Q. Did you specifically review the Surrebuttal Testimony of David Lawrence filed on June 8?
A. I did.
Q. And based on that review, do you have any additions or corrections to your prefiled testimony?
A. My conclusions really remained the same. He provided some additional information on one of the comps that I think confirmed his observations on some area in a basement. He provided significant data in the Brookings market. Some of it $I$ had; some of it $I$ didn't.

And then $I$ went to his conclusions, which basically confirmed my conclusion that through all of this evidence
some of the key factors really are proximity to employment and support centers, whether it be medical, whether it be shopping, whether it be jobs, and that is the key driver.

And his conclusions, I believe -- I'm not speaking
for him -- confirmed my conclusions that a properly developed wind farm in South Dakota does not have a negative impact on value.
Q. Okay. Other than the public dates that you just provided, would your answers in your prefiled testimony be the same today if $I$ asked you the same questions? A. Yes.

MS. AGRIMONTI: Mr. MaRous is available for cross-examination.

MS. CREMER: Thank you.
Staff.

## CROSS-EXAMINATION

BY MS. EDWARDS:
Q. Thank you, and welcome back, Mr. MaRous. This time

I have no questions for you.
MS. CREMER: Thank you.
THE WITNESS: I can't say oh, darn.
MS. CREMER: No. But you can always think it.
Ms. Mogen.
MS. MOGEN: No questions.

MS. CREMER: Ms. Kaaz.
MS. KAAZ: Believe it or not, I do have one question.

## CROSS-EXAMINATION

BY MS. KAAZ:
Q. Did you visit my property with David Lau as you were researching properties?
A. The answer is I did go by your property. I did not physically go on the site, but $I$ observed it. I actually drove virtually every road in the project footprint and with particular attention to those residents that had concern or objection, including a tour past your property, including a tour, although way around, Punished Woman's Lake and, again, just kind of looking at this as an understanding of the lay of the land. Q. I have been told that $I$ am one of the outspoken persons in Codington County. Why would you not deem it -- you and David Lau deem it important to speak to me so you could give a good testimony considering the property values around my area?

MS. AGRIMONTI: Objection. Relevance, scope, and she's testifying.

MS. CREMER: I will sustain the objection.
Q. Did you evaluate my property?
A. The answer is generally I did. I had the benefit of
reviewing two independent appraisal reports done for lending purposes, one done in 2013, which I believe had an estimate of value of $\$ 185,000$, and that was the time $I$ believe you were moving the house onto the site.

I reviewed the comments by the appraiser detailing the issue of limited market data, a soft economy, relatively minimal services, restaurants, bars, and limited employment opportunity, and basically exceptionally soft market.

Then I reviewed in 2017 by the same appraiser where the increase of value $I$ think was up to $\$ 205,000$. I was -- and basically the same comments about the immediate area.

Of particular concern to me in both appraisers was to look at influences, positive and negative. And there were specific comments in there as to outside influences having a negative impact on value, adverse environmental impacts having an impact on value, and under those sections in both report there was absolutely no mention of the proposed wind farm, which was known in both times. Q. I don't know why that was not given to us but I also spoke with my banker and they had no knowledge of this as well.

## MS. AGRIMONTI: Objection. She's testifying

again. I would ask that she be limited to asking questions.

MS. CREMER: Did you have a question, Ms. Kaaz, on that?
Q. So did you evaluate my property while driving around with David Lau?

MS. AGRIMONTI: Asked and answered.
MS. CREMER: I believe he can answer that.
A. I reviewed your property. I reviewed the proposed -- I think there's potentially three turbines that would be sited by your property. I kind of looked at the view, you know, to and from your property. I looked at the conditions of the immediate neighborhood.

So I took those under consideration. I did not provide individual appraisal reports for each property in the project. But in your particular situation there was actually two independent reports, 113 and 117, that $I$ did consider at a review.
Q. What date did you drive by my property?
A. I believe -- I can look in my records, but it was plus or minus February 18, 2017. I mean, 2018.

MS. KAAZ: No other questions.
MS. CREMER: Thank you.
Commissioner Hanson.
COMMISSIONER HANSON: Good morning.
THE WITNESS: Good morning, sir.

COMMISSIONER HANSON: Welcome back.
THE WITNESS: Thank you.
COMMISSIONER HANSON: Have you enjoyed your stays in our capitol?

THE WITNESS: I have. I have.
COMMISSIONER HANSON: On -- and you don't need to look this up, but in your testimony on page 6 and pretty much throughout your testimony in a variety of areas you've stated that you concluded that there was no market data indicating the project would have a negative impact on either rural, residential, or ag property values in the area surrounding the project.

Could we supplant the word "positive" for negative? I concluded that there was no market data indicating the project would have a positive impact on either rural, residential, et cetera? Or did your research find that the project would have a positive impact?

THE WITNESS: That's a long question, Commissioner. It's my opinion it's going to have a positive impact. But my focus was just to make sure there wouldn't be a diminution. And as my report goes to the economic vitality and really the addition to the agricultural -- addition into the community, in my opinion, is very positive, and it translates to the
dollars being generated by taxes and by immediate payments into the neighborhood. And I think as we have heard from one of the property owners, the impact on the schools, the roads, the job situation, it trickles all the way through. In the long-term I think it's going to be very positive once this project is built and stabilized.

COMMISSIONER HANSON: Okay. So one of your statements that for ag properties that host the turbines the additional income from the wind lease may increase the value and marketability of those properties, are you saying that's true for other properties that are not hosting a turbine?

THE WITNESS: The answer is yes because it brings up the values of the entire community. It provides more focus on investors, and it provides credibility to that immediate market area as a solid community. So the answer is yes.

Plus it provides better support for some of the new technologies having to do with some of the irrigation type issues and being able to upgrade some of the equipment to provide modernization to the whole ag community.

COMMISSIONER HANSON: Thank you.
In your testimony -- I'll call it rebuttal.

Yes. It's the Prefiled Rebuttal Testimony. On page 6 there is -- you answer some positions that were stated by Mr. Lawrence in his testimony.

I'm just curious on item 3.
THE WITNESS: What exhibit is that?
COMMISSIONER HANSON: I don't know that you need to look at it.

THE WITNESS: Oh. Oh, okay.
COMMISSIONER HANSON: I'll explain it, I think, sufficiently.

THE WITNESS: Okay. Thank you.
COMMISSIONER HANSON: There is a home in question on Ratham Loop as to whether or not it has a finished basement or not.

I'm just curious. Do you recall that?
THE WITNESS: I clearly recall it, yes. Because it was a point of contention, concern, additional investigation, and issue.

COMMISSIONER HANSON: Did you go back to the property and ascertain whether it has a finished basement or not?

THE WITNESS: I didn't have to because I was given pictures of the interior that clearly showed that a portion of the basement was finished.

COMMISSIONER HANSON: Okay.

THE WITNESS: From the outside on the frontage you really can't see it because of the way the elevation is. But those interior photos do show that there is a partial finished basement.

COMMISSIONER HANSON: Thank you very much.
That's all the questions $I$ have.
MS. CREMER: Commissioner Nelson.
COMMISSIONER NELSON: Welcome back.
THE WITNESS: Thank you, Commissioner.
COMMISSIONER NELSON: Just a couple of questions.

As you were talking about your review of the two independent appraisals of the Kaaz property did $I$ hear you correctly that they indicated that there were some negative environmental impacts on that property?

THE WITNESS: No. There's a specific portion in each appraisal that basically -- actually two different sections that deal with specific potentially negative environmental conditions. And then there's a section dealing with kind of neighborhood issues that, let's say -- and I'm going to -- from a negative, if you were, you know, building a garbage dump next door to it or something that would, you know, change the character of the area, those sections were in each report. They were addressed by the appraiser, and there was no comments
made about the pending wind farm as having any impact.
COMMISSIONER NELSON: Thank you.
If $I$ could go to your Direct Testimony, on the second page, the top of the page, the question was asked, "What is your role in the project?" The last sentence in your answer -- and $I$ need you to explain this to me.

The last sentence says, "When I use the phrase 'proximity to wind turbines' I generally mean turbines within three to five times the hub height of a wind turbine." That sentence doesn't make sense to me. Help me understand what it says.

THE WITNESS: Basically from the tip -- and let's just say the tip is 400 feet. Three to five times would be 1,200 to 1,500 feet. And, conversely, if the tip height is lower, convincingly [sic] if the tip height is higher, that's kind of the range that generally is looked at.

COMMISSIONER NELSON: Okay. So what you're talking about is something that is within that distance from a turbine.

THE WITNESS: Yes. And it's usually a
residential property. My experience has been that if it's vacant agricultural land, it really has no impact. But the concern is residential property. Then you go to the next situation, and is there basically a natural view
shield by trees or outbuildings, et cetera, that, you know, either does or does not have some blockage of the view.

And it also goes to the whole noise issue, but I'm not an acoustical engineer.

COMMISSIONER NELSON: So because of your
definition of proximity, is it your thought that there is no impact from the wind turbines beyond that definition of proximity?

THE WITNESS: From all the investigation that I've done and all these numerous peer reviewed studies that has been done, that is correct.

But, you know, each situation needs to be looked at and evaluated. That's why I physically go out and kind of just drive the area, look at the situation, look at the issues.

COMMISSIONER NELSON: Thank you.
CHAIRWOMAN FIEGEN: I don't have anything.
MS. CREMER: Commissioner -- or Chair Fiegen has no questions.

So, Dakota Range, do you have any redirect?
MS. AGRIMONTI: I do not.
MS. CREMER: Staff, do you have any recross?
MS. EDWARDS: No.
MS. CREMER: Ms. Mogen, do you have any recross?

MS. MOGEN: No.
MS. CREMER: Ms. Kaaz, do you have any recross? MS . KAAZ: No.

MS. CREMER: Thank you. You may step down.
(The witness is excused.)
(A short recess is taken.)
MS. CREMER: All right. We are back in session.
And, Dakota Range, I believe you were ready to call your next witness.

MS. SMITH: Yes. We're going to call
David Phillips.
David Phillips,
called as a witness, being first duly sworn in the above cause, testified under oath as follows:

## DIRECT EXAMINATION

BY MS. SMITH:
Q. Mr. Phillips, could you please introduce yourself to the Commission.
A. Sure. My name is Dave Phillips. I'm the Vice

President of Environmental at Apex Clean Energy.
Q. And did you file Prefiled Direct Testimony with the Application in this matter?
A. Yes.
Q. And is that Prefiled Direct Testimony in Exhibits A7 and A7-1 through A7-2?
A. Yes.
Q. And did you also file Prefiled Rebuttal Testimony?
A. Yes.
Q. And is that Prefiled Rebuttal Testimony in A8 and A $8-1$ ?
A. Yes.
Q. And can you briefly discuss the topics that are covered in your testimony, your Direct Testimony, and your Rebuttal Testimony?
A. Sure. My testimony basically covers environmental compliance-related topics ranging from wetlands to cultural resources, water quality, surface water issues, bird and bat -- or wildife studies.

Do you need more specifics, or is that sufficient?
Q. I think that gives them the gist of what you covered. Thank you.
A. Okay.
Q. And do you have any additions or corrections to your testimony?
A. No, I do not.
Q. Do you have any updates on any survey work that's being conducted?
A. Well, there are ongoing interactions or field surveys with the Sisseton-Wahpeton Oyate Tribes. Really actually all the field work has been completed,
evaluating the layout and potential impacts to sensitive tribal cultural properties. And all of those have been avoided.

We actually met with the SWO -- that's the acronym for the tribe -- and did some kind of minor final micrositing in the field yesterday.
Q. And can you discuss the environmental analysis that was conducted for the project kind of starting from a macro level and working down into some of these field studies that you have been referencing?
A. Sure. We go through a process, particularly as it relates to wildife and wildlife habitats, of interacting with the regulating agencies, looking at the site early on, initial site assessment work, kind of looking at whether or not this is overall a good area, what are the obvious resource concerns we should be looking at.

We agree on site-specific study plans to evaluate those resource concerns in more detail. Then we meet again with the agencies. That would be the South Dakota Game \& Fish folks, U.S. Fish \& Wildife Service. We review the study results and agree on impact avoidance or minimization measures. And all of that is basically incorporated into the design or operational protocols of the project.

That information actually also extends out in
helping us decide the scope of our operational monitoring studies to evaluate our impacts or the -- you know, the effectiveness of our avoidance and minimization measures.

We also look at wetland resources early on using available desktop information. We complete field studies to specifically delineate those and avoid and minimize impacts to those resources so that we can comply with state and federal permitting requirements with regard to wetlands.

We also do the same with cultural resources. We do early desktop reviews, interacting with SHPO and the available data from previous surveys in the area. We then send cultural resource contractors out to evaluate the actual ground disturbance areas and microsite in response to their findings.

In this project we also involved the SWO in those surveys so they could specifically evaluate tribal resource concerns.
Q. And with respect to potentially untilled grasslands, were there steps taken to avoid or minimize impacts?
A. Yes. Yes. Early on we met with South Dakota Game \& Fish and discussed measures to avoid and minimize impacts to grasslands. We used the Bowman, et al. data initially, which is available data of existing or known potential untilled grasslands. That was actually used by

Western Ecosystems Technology, environmental consultant, to look specifically for native intact prairie habitat as it relates to potential habitat to federally listed butterfly species. Very small areas were identified near, mostly outside of the project area, but we designed to avoid those.

We also avoided the majority of the potentially untilled grasslands in that data set of Bowman, et al. So yeah.
Q. Yeah. And how many acres are potentially to be impacted by the project of potentially untilled grasslands?
A. With our current design it's just over 9 acres of permanent impact listed as our -- actually almost all of that is linear impacts associated with turbine access roads. So very minor small foot print type of impacts. Q. And can you talk a little bit about any efforts that Dakota Range made to avoid habitat fragmentation?
A. Well, one of the primary recommendations from environmental resource agencies is to try to place our disturbance in already disturbed habitats; for example, tilled cropland.

So we basically did that. I mean, really focused our siting on those less optimal grasslands and/or cultivated croplands.
Q. And as far as -- and $I$ know you were not present yesterday, but $I$ will indicate there were some questions regarding cumulative impacts.

Can you talk about any cumulative impacts analysis or considerations that were made as part of development of the project?
A. Sure. The cumulative -- from my perspective, I mean, I look at cumulative impacts as it relates to environmental resources, potential impacts to birds and bats and wetlands and sensitive habitats.

With regard to the PUC requirements, they'll look specifically at operating or in-construction projects. There really are none in the area. The nearest $I$ think is over 30 miles to the west. You know, so we look at that issue early on, recognizing that we're not likely to have any sort of, one, significant adverse impacts with our project specifically but, two, additive or cumulative impacts associated with extensive development in an area.

MS. SMITH: All right. I have no further questions, and Mr. Phillips is available for cross-examination.

MS. CREMER: Thank you.
Staff.
MS. REISS: Thank you.

## CROSS-EXAMINATION

BY MS. REISS:
Q. Good morning, Mr. Phillips.
A. Good morning.
Q. In response to Ms. Smith's questions you indicated that there were 9 acres of grasslands that would be impacted by the project; is that correct?
A. It's actually -- approximately 9.7.
Q. Okay. Thank you. And is that a calculation of the direct and permanent impacts?
A. Correct.
Q. And that does not take into account any temporary or indirect impacts; correct?
A. That's correct. Temporary impacts are
approximately -- it's just over 100 acres. The majority of that is associated with the installation of collection lines so they're trenched in, and then that area is re-vegetated with native seed mixes recommended by the NRCS or Natural Resource Conservation Service.

Some of that is on the kind of roadsides where we have some temporary disturbance and then reclaim the shoulders of those roads with similar re-vegetation measures.
Q. And what is the quantity -- or the quantity of the indirect impacts?
A. I'm not sure what you mean by indirect impacts.
Q. Did the company review potential indirect impacts?
A. To grassland habitat?
Q. Yes.
A. Again, I guess I'm not sure what you mean by
indirect impacts. Could you give me an example of what you're referring to?
Q. What is your definition of indirect impacts, as you used it?
A. Are you saying as $I$ used it?
Q. Yeah.
A. I'm not sure I did. Are you thinking temporary impacts?
Q. No. Let me go back.

Did the company ever consider whether there would be indirect impacts to grassland habitats due to the construction of the project?
A. I don't believe so. Again, I'm not sure what you mean by indirect impacts. We do look specifically at the amount of disturbance that would occur.

The way our design process works is basically as the environmental group we provide constraints to our engineers who design the project around those constraints. Typically in the case of grasslands we're talking about very physical, specific locations of a
resource that we want to avoid.
We did not implement setbacks from the potential grasslands or anything like that. We simply avoided and minimized the impacts.
Q. Did the U.S. Fish \& Wildlife Service or South Dakota Game, Fish \& Parks ever bring up the issue of indirect impacts?
A. On grasslands?
Q. Yes.
A. Not to my knowledge. I know that they requested avoiding and minimizing and possibly mitigating for impacts. So and it's fairly clear in our sort of summaries of our correspondence that we agreed to avoid and minimize, which actually it's pretty significant the way this project design is laid out with such minor impacts to the grasslands that are present on the landscape.
Q. Are you familiar with Staff's Exhibit 1, page 89 of the exhibit?

I believe the documents are next to you.
A. This one (indicating)?
Q. Yes.
A. Yes.
Q. Are you on page 89?
A. I may have looked at the wrong document.

MS. CREMER: Can you give him the exhibit number again? I'm not sure he has the --

MS. REISS: It would be S-1 and marked as JT-1.
MS. CREMER: I don't think he's --
MS. SMITH: I'm sorry. I didn't mean to
interrupt you. I was just going to say I believe to the other side of you is a set of Staff -- no. Back.

There you go. Staff exhibits and I think those are marked with tabs that show the numbers, and that may help.
A. Okay. What was the exhibit? S --
Q. It would be $S-1$, and then at the top of the page it would be Exhibit JT-1, page 89 of 156.
A. I may need some guidance.

MS. CREMER: If you want to approach him and show him, because $I$ think the numbering system is odd for him.

MS. REISS: Thank you.
(Discussion off the record.)
A. So you are referring to the meeting summary and comments from I believe the Fish \& Wildlife Service and, yes, I am familiar with that.
Q. Yes. Did you attend that meeting?
A. Yes.
Q. Are you aware of any comments provided by the U.S.

Fish \& Wildlife Service from that meeting?
A. Yes.
Q. Was one of those comments a reference to a Shaffer and Buhl Study?
A. I believe so.
Q. Are you familiar with that study?
A. Moderately, yes.
Q. Did the Applicant review that study after receiving this comment from the Fish \& Wildife Service?
A. Yes.
Q. And did the study discuss indirect impacts due to the destruction of grasslands?
A. I now understand your question. So you're referring to the potential displacement of grassland birds that would result from our permanent and/or temporary impacts? Q. Yes.
A. As an indirect impact?
Q. Yes.
A. Got it. Sorry to be dense on that one.

Yes. We did review that article. We did discuss that with both the Fish \& Wildife Service and South Dakota Game, Fish \& Parks.
Q. Did the Applicant take into consideration that study when determining the final layout for the project?
A. Definitely. What we agreed on was to avoid and
minimize impacts, and we did not voluntarily offer mitigation for those impacts. The indirect impacts associated with grassland birds, there have been a couple or few studies on that topic. The information is not very definitive for use in defining kind of what mitigation would be appropriate.

The Shaffer and Buhl Study is actually a good example where you have some bird species that show a response to the presence of a turbine at different distance bands from the turbine, whereas at another project that same species may show no response. And in some of those distance bands you may see an effect actually in the other direction where you have increased density of certain species.

So it's a very unclear science. But I can say that, you know, I'm a wildife biologist. We take the environmental compliance-related topics very seriously, and we view the avoidance and minimization to these impacts of grasslands as a much more appropriate measure than to impact them at a high level and then try to offset that impact through mitigation.

So that was more the path we took, the constraints we provided to our engineers to design around, which does result in some energy loss and revenue loss for the project over time, but we view that as the more
appropriate approach.
Q. Did you ever quantify this issue within the Application?
A. What issue? Indirect impacts?
Q. Yes.
A. I don't believe we did.
Q. Why not?
A. As I mentioned, we avoided and minimized these types of displacement effects by minimizing our footprint in these undisturbed areas. So it's a fairly minor or -maybe insignificant type of an impact.
Q. As an environmental biologist wouldn't you believe that it would be prudent to look at all of the impacts and provide those in the Application for review?
A. Certainly. I mean, I think you could say that we have provided information on this topic with the very specific disturbance estimates that we provided for the different habitat types.
Q. In your Rebuttal Testimony you indicated that there are leks in the project area; is that correct?
A. Correct.
Q. How many leks are there?
A. There were four discovered in -- or evaluated, detected, in our surveys, one of which is about a third of a mile from the nearest turbines.
Q. Is that lek active?
A. It was in 2017 when it was last surveyed. Or at least surveyed by our project.
Q. In your Rebuttal Testimony you indicated that the project moved facilities to avoid two of the leks, but that required some facilities be moved closer to another lek; correct?
A. Correct.
Q. Is the closest lek that active lek you indicated previously?
A. Yes.
Q. And were the two leks you avoided active or inactive?
A. I would have to go back and look at that. I mean, each was active during one of the survey periods, 2016 or '17, but I'm not -- I'd have to look specifically at the study again.
Q. Would you look at -- would you look at Figure 1 of Appendix $H$ for me of the Application?
A. Yes.
Q. Based on the figure, would you agree that one of those leks was an potential lek?
A. Yes. Lek No. 4.
Q. And that potential lek is the lek which you moved turbines and facilities away from; correct?
A. Correct. I personally did not move the facilities, but we considered that lek in our design.
Q. Can you explain why the project did not give more weight to an active lek versus a potential lek?
A. Well, potential is -- the term you're referring to, a lek would be considered accurate if you document males strutting multiple times. It might be a minimum of two males.

So basically the consultants discovered strutting males. I'm not sure they discovered them two times or something to that effect, so that's why it's called potential. We view that as a sensitive area that warrants consideration in our siting.

The active lek was also very low numbers of males strutting. We have considered that actually fairly carefully in our siting by siting greater than a quarter mile -- it's actually a third of a mile with our nearest turbines. I think there's just a few turbines within a mile.

We addressed that potential risk by minimizing our construction activities during the lekking and nesting period within a mile of the lek. So the lekking behavior occurs basically through the night and the morning so any construction activities that we needed to do during that period would be done from three hours after sunrise to an
hour before sunset, so as to not disturb that lek.
Q. Do you recall what the Game, Fish \& Parks' recommendation was for placing turbines and facilities near a lek?
A. I believe in our early coordination $I$ believe they requested a mile setback.
Q. And you indicated the closest lek was .3 miles from the nearest facility; is that correct?
A. Approximately a third of a mile, .33. I think it's just over that, but by a fraction.

So the recommendation is not a rule or policy that protects this species. In other words, we're not required to follow it by law, but we recognize that this is an important resource. The construction timing stipulation and setback is also part of the recommendation.

We basically acknowledge that it would be very difficult to install a project here and honor that one-mile setback, but by incorporating that construction timing stipulation, that it could work and would work. I think that it's important to note that the available research on the effect of wind turbines on leks is evolving, and $I$ would say that the current science indicates it's not likely to have a displacement effect.

A turbine a third of a mile away is not likely to
influence the birds.
And habitat impacts in proximity to that lek are very minor. So the lekking birds, the hens, you know, are able to go out and continue to use that habitat during the operations of the project for nesting and brood rearing.
Q. Thank you. I just have one final question for now.

From a purely environmental perspective would the impacts be less if the turbines were all sited on cultivated land rather than grassland?
A. I believe that the ground disturbance would probably be similar. It might actually be greater because you need to have -- place turbines further apart or in, you know, more dispersed across the landscape.
Q. How about related to grassland impacts?
A. Well, if we sited no facilities on grasslands, then obviously that would be less. The landowners that own the property with grasslands would probably be the most impacted in that they would receive no turbine revenue. Q. But from a purely environmental perspective, there would be less impact if they were all on cultivated land? A. I really think that's a matter of perspective. There are a lot of species, organisms that are adapted to tilled agricultural, highly disturbed habitats, so by avoiding effects in one habitat you're actually
increasing effects in another.
But, you know, certainly by doing that we would minimize or reduce our impacts in grasslands.

MS. REISS: Thank you.
Staff has nothing further at this time.
MS. CREMER: Thank you.
Ms. Mogen.
MS. MOGEN: No questions.
MS. CREMER: Ms. Kaaz.
MS. KAAZ: No. No questions.
MS. CREMER: Thank you.
Commissioner Nelson.
COMMISSIONER NELSON: Thank you. Thanks for being here.

Were you present this morning for the testimony of Wade Falk?

THE WITNESS: Yes.
COMMISSIONER NELSON: And did you hear the
question $I$ asked him and his response when $I$ asked him as a landowner he would prefer to have a turbine on crop ground or on pastureland?

THE WITNESS: Yes.
COMMISSIONER NELSON: And his answer was on pastureland.

I understood your testimony to be that you were
giving preference to placing turbines on crop ground; is that correct?

THE WITNESS: Generally we're directed or recommended by the environmental agencies to optimize our siting in disturbed habitats. So yes.

COMMISSIONER NELSON: And so you are placing a preference on advice from environmental agencies as opposed to landowners; is that correct?

THE WITNESS: Absolutely. In this situation.
COMMISSIONER NELSON: Thank you.
The only other question I've got, there was a discussion about leks. How are leks impacted by cattle grazing?

THE WITNESS: That's a good question. I would expect there would be not too much impact. The leks are basically at courtship or displayed breeding ground. They're usually fairly visible to other birds and, you know, so extensive grazing, things like that, may actually enhance the visibility of those birds.

I'm just speculating, though.
COMMISSIONER NELSON: And you, Dakota Range, doesn't have any other expert that would be able to cast anymore light on that question? Is that correct?

THE WITNESS: I would say I would be the expert on that topic.

COMMISSIONER NELSON: Okay. Thank you.
THE WITNESS: I've worked a lot with various prairie grass species and siting of primarily wind development and their habitats.

COMMISSIONER NELSON: Okay. Thank you.
MS. CREMER: Commissioner Fiegen.
CHAIRWOMAN FIEGEN: Thank you. And certainly thank you for being here today.

Did you look at the stipulations? Because it's in your rebuttal, Stipulation 34, where it talks about the one-year independent conducting of a postconstruction survey.

But the second year it appears to me the coordination would be determined by U.S. Fish \& Wildife Services and Game, Fish \& Parks, but it doesn't have anything that the Commission would actually see the report or be in coordination to see if you have to do a second year report. Although we do get a copy of it the first year.

So why wouldn't we also have the Commission to ensure -- at least be at the table?

THE WITNESS: I don't know the answer to that question. I mean, generally when we're coordinating on wildlife impacts it's with the U.S. Fish \& Wildiife Service and the State Wildife Agency. In other state
permitted projects, those reports are provided. I'm trying to think of situations where a PUC or equivalent would be at the table, but $I$ don't see any problem with that.

CHAIRWOMAN FIEGEN: Okay. And then the -your -- we certainly have talked a lot about whooping cranes in dockets of wind farms. And you have a procedure that you will have. Can you explain that just a little bit more?

Because it's hard for me to understand because I don't follow whooping cranes and how you would know they're 1,000 feet above and who's monitoring that and when do they land or when do they -- could you just explain more about that?

THE WITNESS: Sure.
In this part of the country the primary risk period is spring and fall migration. The whooping crane migration corridor is very well-defined. It's actually not very close to the project. So the likelihood of whooping cranes moving through the area of the project is very low.

The impact of wind projects in the migration corridor on whooping cranes is also not documented as likely. No whooping cranes have flown into turbines, even though there are literally hundreds or possibly
thousands within their concentrated migratory pathway.
So to answer your question, in coordinating with the agencies, they agree it's a very low risk issue. The likelihood of take or impact is unlikely.

So we, though, take reasonable precautions by training our operations Staff. We'll actually notify them during the migration period, hey, stay alert. We're in the migration period. They're a very prominent, very visible bird. So if present -- you know, these guys aren't actually out surveying for them, but if they see them, we implement a response immediately, which is to basically contact the remote operations center.

Those guys would respond by shutting turbines down if there were cranes in close proximity to the turbines, and we would sort of rapidly coordinate with the Service, most likely, on the next steps.

CHAIRWOMAN FIEGEN: So I still need some understanding of -- do you work with other agencies? So is there kind of an alert system? If all the sudden someone sees something within 100 miles, would they call Apex and say, hey, we have some sighting 100 miles from you, it could possibly -- or how does that work?

THE WITNESS: We don't have that established for this project. In areas where we are operating projects where whooping crane risk is more significant we actually
have kind of an interactive relationship with the Service.

South Texas is a great example. These birds wind up down there in winter. There's a lot of avid birding groups. When they see whooping cranes they tend to report them on the internet. The Fish \& Wildife Service are aware of those, and they've actually contacted us and say, hey, you know, we have whooping cranes near project $X$.

If it's 100 miles away, $I$ don't think they would contact us, nor would we be concerned about it. If it was on-site and within a couple miles and on the ground, then we would certainly pay attention to that issue, probably monitor that bird until it left the area.

CHAIRWOMAN FIEGEN: So how far do whooping cranes travel?

THE WITNESS: During migration? I actually read this recently and I'm going to cite the wrong number but I think -- it depends on the weather, but $I$ think they can -- from one stopover location to the next can be up to 150 miles.

CHAIRWOMAN FIEGEN: So if they're at a location let's just say south of you 50 miles or 30 miles or 100 miles or 10 miles -- and $I$ know it's a potential and I know it's a small risk, but if somebody sighted that,
wouldn't you have some type of coordination that they could possibly fly through the area?

THE WITNESS: We could -- we could set that up. It's not something that's been recommended by the wildlife biologists that regulate that issue.

If we had birds south of the project during spring migration, meaning they may be then flying north, and we were notified of that, I think probably our response would be to have our operational staff, you know, remain very vigilant and aware so that they could respond quickly.

CHAIRWOMAN FIEGEN: Okay. Thank you.
COMMISSIONER HANSON: Still morning. Good morning.

THE WITNESS: Good morning.
COMMISSIONER HANSON: I wasn't going to ask questions on whooping cranes, but now I am.

THE WITNESS: Okay.
COMMISSIONER HANSON: My wife and $I$ were down in Nebraska and observed the -- spent time down there so we could watch the sandhill cranes and whooping cranes this year. It was very neat.

THE WITNESS: It's amazing.
COMMISSIONER HANSON: Do you consider yourself a birder?

THE WITNESS: Yes.
COMMISSIONER HANSON: That's great.
You referred to the whooping crane migration pathway is well-defined, and it certainly is. However, you referred to it singularly, and are there not two pathways that are fairly defined for whooping cranes?

THE WITNESS: For this population of whooping cranes, no. There is an eastern population that is -actually the migratory corridor is -- that's well-defined, but it is substantially east of the project.

COMMISSIONER HANSON: Correct. But there are the two of them.

THE WITNESS: Yes.
COMMISSIONER HANSON: I just want to make sure I -- you know more about this than I, so I just wanted to make sure $I$ was correct there.

And $I$ would agree with you that it's very unlikely that it would be affected in this area. I don't mean to testify, but $I$ really appreciate you being here.

It seems like you're responsible for quite a bit of information that was presented here on environment, especially avian mortality. And I'm wondering, there seems to be somewhat of a paradox when $I$ look at information that's presented such as it's on -- and no
need to turn to this, but on the Applicant's page 14-13 under State Listed Species it makes the statement that's somewhat reflected throughout your testimony and throughout so much testimony we've heard on other projects and things of that nature when it states that, "Only one individual was observed during 221 hours of systematic avian study, suggesting that use of the project by this species and associated risk of impact is very low."

But isn't that somewhat of a paradox? We know that this is a rare species so shouldn't we -- isn't it intuitive that there would be very few of them observed? And shouldn't it tell us that in relationship to populations, especially if you're looking at a red-winged blackbird or a starling, there's thousands and thousands of them, and there's certainly more likely to be a higher mortality there than there would be with a species that is -- that is endangered.

So when you look at the population, 1,000 blackbirds, a variety of them obviously but losing 1,000 blackbirds as compared to losing a peregrine falcon, it shouldn't be just by numbers. It should be by percentage.

So when we look at it from the standpoint, oh, there's only one, isn't that one perhaps even more
important than the hundreds and perhaps thousands of another species?

THE WITNESS: I think you're on the right track in thinking in terms of relative impact. So a large number of birds could be impacted in a large population and have a similar effect as one individual being impacted in a small population.

The species that you're referring to, peregrine falcon, that would be -- it is a state-listed species. If there was nesting habitat in the area, which there's not, we would certainly consider that because the impact risk would be much more likely. But to document one peregrine over the course of two winters and springs of study suggests the likelihood of affecting that individual that was observed or the individuals in the local area population or regional population is very unlikely.

And to address your question, should take occur, meaning a collision mortality, I mean, I would still view that, one, a very rare event likely to happen often during the operation of the project but, two, not a significant impact to the population.

The peregrine falcon is a fairly remarkable success story that was once listed on the Federal Endangered Species Act, has since been delisted,
primarily because of its return in numbers -- well, actually specifically because of that.

So it's become fairly common in some parts of its range, particularly in urban settings where there's a lot of artificial nesting habitat created by buildings.

COMMISSIONER HANSON: Thank you very much for the answer.

I probably want to refine that a little bit more, but you did a great segue in relationship to the peregrine falcon and the positive actions that were taken. We even did that in Sioux Falls to introduce and to help the peregrine falcon recover.

And that's another question $I$ wanted to ask so I appreciate that. Could the Applicant not take -- I should rephrase that in a positive fashion.

Could the Applicant take actions to help, as has been done with what you just explained with the peregrine falcon, in the area to help assure that certain species have a better opportunity for recovery?

And I say that --
THE WITNESS: Sure.
COMMISSIONER HANSON: -- knowing that the information that you provided to us along with what the Applicant has provided to us shows they're following through on all of those things, that they're doing an
admirable job on protecting and attempting to mitigate challenges that occur for mortality.

But on the other side of that, in addition to taking all of these precautions, can something positive be done to help assure the viability of the species?

THE WITNESS: The typical mechanism for that is through a state or federal permitting process. So where we go -- develop a project and we actually anticipate specific impact or take of an individual species that is protected by regulation. Often that regulation requires us to offset that effect.

In the case of the peregrine falcon or grassland habitat or grassland bird species, there's no mechanism to do that in South Dakota, no regulatory or permitting mechanism to do that.

COMMISSIONER HANSON: Correct. However, there's nothing preventing the Applicant from doing it.

THE WITNESS: That is correct.
COMMISSIONER HANSON: Okay. Thank you very
much. I really appreciate your testimony and the information that you provided to us.

Thank you.
THE WITNESS: You're welcome.
MS. CREMER: Dakota Range, did you have any redirect?

MS. SMITH: I do not.
MS. CREMER: And, Staff, do you have any recross based on Commission questions?

MS. REISS: No, thank you.
MS. CREMER: Ms. Mogen.
MS. MOGEN: I have some on grasslands.

## RECROSS-EXAMINATION

BY MS. MOGEN:
Q. In healthy grasslands what is the depth of roots to grasses?
A. I don't know the answer to that.
Q. Are you aware of soil -- the benefits of soil carbon sequestration through grasslands?
A. To some extent but would not consider myself an expert or overly knowledgeable on that topic.
Q. Can you speak a little bit to it for somebody who hasn't heard anything about it?

MS. SMITH: Object that this is outside the scope of his testimony.

MS. CREMER: I would sustain that. This part is only as to Commission questions that were raised for recross.

So you can ask your next question if you have one.

MS. MOGEN: I'm finished. Thank you.

MS. CREMER: Ms. Kaaz.
MS. KAAZ: No questions.
MS. SMITH: I don't have anything further.
MS. CREMER: All right. With that, you may step down, and you may call your next witness.

THE WITNESS: Thank you.
(The witness is excused.)
MS. SMITH: Certainly. We'd call Brenna
Gunderson.

## Brenna Gunderson,

called as a witness, being first duly sworn in the above cause, testified under oath as follows:

MS. SMITH: So sorry for the delay. I just wanted to hand that out before we started. And I may not have kept one for myself. So I may have to get one in a second. Thank you.

Did you find it?
THE WITNESS: I did not.

## DIRECT EXAMINATION

BY MS. SMITH:
Q. Ms. Gunderson, can you please introduce yourself to the Commission.
A. Sure. My name is Brenna Gunderson, and I'm a Director of Project Development with Apex Clean Energy. Q. And I know you were looking for your prefiled
testimony so we're just going to get you the right binder before we start. I think it's hard when we have two.

Did you file Prefiled Direct Testimony with the Application?

MS. CREMER: I'm going to interrupt for a minute.

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                        (Discussion off the record.)
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Q. I think you were saying no, you didn't but - -
A. I did not, but I'm the backup for Mark Mauersberger who did.
Q. And did you file Prefiled Rebuttal Testimony on May 21, 2018?
A. Yes.
Q. And is your testimony A15 and Exhibits A15-1 through A15-4?
A. Yes.
Q. And can you give a brief description of what is covered in your testimony?
A. We are asking that the permit allow us to shift a turbine within 500 feet as long as we maintain the setback requirements as well as avoid other areas that we have committed to avoid and meet sound and shadow flicker criteria.
Q. And your proposal is provided in A15-2; is that correct?
A. Yes.
Q. And do you have any additions or corrections to your prefiled testimony?
A. I think the correction would be the -- there were five locations that we believed were -- at the time that we needed to make an arrangement or change due to SWO reviews of the site. And that number now has shifted. It's changed.

And the reason for that, two of the five sites were cleared by SWO. Two of the sites would require a shift in order to avoid them. And the one we chose to use an alternate turbine location.
Q. And then the final one, did you also remove that? I think there were five you mentioned. Was there another one that was removed as well?
A. We did remove another one as well. No. 49.
Q. And let's just walk through. We have some exhibits that were filed as supplements to your testimony, and we're going to start with A15-3, which are the constraints maps.

Can you please describe what are shown in these exhibits?
A. Sure. First you'll see a solid black line, which is the boundary of the project, and within that it is showing turbine locations using different colored dots.

So you have the blue dots which we're looking at as potentially primary turbine locations, and the yellow dots are alternate turbine locations.

You will also see there's a gray-blue color, and that is depicting required setbacks. And there is a peachish color and that indicates the environmental avoidance areas. And if you look on the bottom right, you will see a key that will indicate what all the different setbacks are.
Q. And then accompanying the overview map, does it also have kind of callouts of different segments of the project?
A. It does. On other pages we broke it down into quadrants as requested by Staff to get a closer look at different areas of the project. And then we went on further to show more specifically the areas where we would like to shift a turbine.
Q. And if you could, let's walk through. There's four maps that are the blowup maps, I'm going to call them, with the close-ups of four proposed turbine shifts.

MS. SMITH: And just we are not going to refer to turbine numbers. We're going to refer to turbine distances because we are sensitive to disclosing potential tribal resources. And so to avoid that we will refer to the shift distance.

The nonconfidential version does not include -it includes an example. It does not include all of them so that we could avoid having to have any issues at the hearing.

So I'm just laying the groundwork. Sorry for that long discussion.
Q. But let's walk through the first callout that is in Exhibit A15-4. And I believe it is the one that says it's 115.7 feet.
A. Yes. This is a shift that we're requesting. You have the red dot and a blue dot. So when we filed the Application it was at the location -- the turbine was at the red dot location, and now we're looking to shift it to where the blue dot is located.
Q. And what is the reason for the request?

MS. REISS: Can we clarify, is this Exhibit 15-3
or 15-4?
MS. SMITH: This is 15-4. I'm pretty sure.
Oh, no. I apologize. You're correct. It's 15-3. Sorry about that.

MS. CREMER: Okay. I couldn't figure out why I couldn't find it either.

MS. SMITH: Thank you for calling it out.
MS. REISS: Sorry for the interruption.
Q. So we are on the callout page on 15-3, a 115.7 foot
shift. And do you know the reason for that shift -- or why you're proposing that shift?
A. Yes.
Q. Do you want to tell us? Is this a tribal resource shift?
A. Yes.
Q. Is that why you're hesitant to say?
A. Yes.
Q. Okay. That's why we're not referring to turbine numbers. So it's okay to reference the reason. You just shouldn't reference the turbine number.

Does that make sense?
A. Okay. Because it's not numbered on there?
Q. So I apologize. Let's move to the second one. 360.4 is the shift distance.
A. This was by the request of a landowner who preferred to have the turbine located between his two fields as opposed to where it was. You'll see the red dot was the original location, and he requested that we move it south. You can see in the picture where it's right on the splits between the way he uses his field.
Q. And then if you'll turn to the third map, which is a distance of 420.7?
A. Yes. This was a request by SWO, a tribal request.
Q. And is this the one that's now being removed?
A. Yes. This one we are now removing -- we would like to remove it altogether because after further analysis, it would bring us over the 30 hours of shadow flicker.
Q. At a nonparticipating?
A. At a nonparticipating residence.
Q. And then if we look at the last one, it's a 13.9-foot shift?
A. Yes. This is an alternate turbine location. It's moved 13.9 feet away from the hedge row shown in the picture.
Q. And as far as the request for 500 feet, would the company be open to a commitment of 325 feet going forward if these shifts that are currently over 325 feet were approved as part of the permit?
A. Yes.
Q. So then if you can look at exhibit -- this time actually 15-4. And I know I'm referring to the right one this time.

Can you explain what's shown in 15-4?
A. 15-4, this is just another way of showing the project with the boundary and all of the facilities. And on this $I$ think it would be just important to point out that we now have a better understanding of where the interconnect switchyard will be located.

And if you look at the legend on the left, you'll
see it's depicted by an orange box.
Q. And -- oh, I'm sorry. Go ahead.
A. Right next to it would be the project substation, which is a small yellow box, as well as our operations and maintenance facility and lay down yard. We are still currently working with the landowner to finalize agreements for the project substation, the lay down yard, and the O\&M facility.
Q. Have you spoken with those landowners verbally to see if they're interested in hosting those facilities? A. Yes, we have, and they are interested.
Q. And on this map that's shown, 15-4, are the blacked out circles turbines that have been removed?
A. I'm not seeing those on this one, but they were on -- I believe the other one they were shown as blacked out.
Q. I'll just point you to an example. I think like A19 over on the right-hand side of the map, if you're looking at it not upsidedown like me, is a blacked out circle?

COMMISSIONER NELSON: No.
MS. CREMER: Ms. Smith, I don't believe the map we're looking at has blacked dots.

MS. SMITH: Mine does. So I'm curious.
COMMISSIONER NELSON: You're on 3.
MS. SMITH: I said I knew I was right, and I was
wrong. So I apologize.
Q. Yeah. So going back to -- let's go back to 15-3 then. And just to summarize, are there eight turbines that have been removed as shown on 15-3?
A. Yes.
Q. And then $I$ believe your testimony was that two additional turbines have been removed also?
A. Right. One would be the one we spoke about, which was already on the callout. The other would be turbine 49.
Q. And then you have a few turbine locations that were alternates that are now going to be prime areas; is that correct?
A. Correct.
Q. And regarding -- we've spoken about four turbines in proximity to Ms. Kaaz's residence. Will all four of those turbines be constructed?
A. We will commit to only constructing three out of the four.
Q. And currently A26 is the alternate?
A. Correct.
Q. And now I'm going to direct you to what we've now marked as A21, entitled Proposed Decommissioning Condition that was just handed out.

Can you summarize what this document describes as
far as a proposed condition?
A. Sure. If Xcel Energy owns Dakota Range, they could file documentation indicating that they would be financially responsibility for Dakota Range, and they would then submit an updated decommissioning plan and cost estimate at that time.

The Commission would then determine the financial security that would be required and the type of form as well as the amount. In the event that Xcel Energy does not own Dakota Range, then the Applicant can file a decommissioning plan and a cost estimate as well prior to the operation of the project and then the Commission would determine the form the amount and the timing of that financial security.
Q. And with respect to if Xcel Energy were to purchase the project and file the documentation indicating it's financially responsible, the proposal is that decommissioning financial security would be reviewed at year 10 of operation?
A. Year 10 of operation.
Q. And if it were not, either that documentation weren't filed or it were not Xcel that owns the project, the proposals and updated plan would be provided prior -60 days prior to operation?
A. Operation, correct.
Q. And as far as discussion of the specifics of the decommissioning financial assurance, why are you proposing holding off on any specifics at this time?
A. We think that it would be better for the owner to be able to understand and get to the Commission with that information, depending on who that owner is.
Q. As they may have -- might the owner have differences of opinion on what form of financial security would be requested?
A. Yep. Correct. Correct.
Q. Other than the updates that you've just provided in your testimony, do you have any changes to the testimony that you provided previously?
A. No.

MS. SMITH: I would offer Ms. Gunderson for
cross-examination.
MS. CREMER: Did you want to offer A21?
MS. SMITH: I would offer A21 as well.
MS. CREMER: Staff, do you have any objection?
MS. REISS: No objection.
MS. CREMER: Ms. Kaaz, do you have any
objection?
MS. KAAZ: No objection.
MS. CREMER: And Ms. Mogen.
MS. MOGEN: No objection.

MS. CREMER: Thank you. It is admitted.
And, Staff, you may cross-examine.
MS. REISS: Staff has no questions at this time.
Thank you.
MS. CREMER: Thank you.
Ms. Mogen, do you have any questions?
MS. MOGEN: I do.

## CROSS-EXAMINATION

BY MS. MOGEN:
Q. Will the turbines in this project have serrated trailing edge blades?

MS. SMITH: I would object. That's outside the scope of Ms. Gunderson's testimony.

MS. CREMER: I believe that is outside of what her testimony is.

Do you have another question? I would sustain
that.
MS. MOGEN: One moment.
What witness should I ask that question to?
MS. SMITH: I don't know. It wasn't in the
scope of anyone's testimony, that $I$ recall. So at this point I'm not sure that it was covered by anyone specifically.

We can look at the record and see if there's something that would answer your question.

MS. MOGEN: It is in Ryan O'Neal's report.
MS. SMITH: Would you mind if we take this off line at a break? I'd be happy to talk with you to figure out if there's a way to answer that question.

MS. CREMER: I think we could do that, and they can either recall him or --

MS. MOGEN: Okay. Thank you.
MS. CREMER: Did you have more questions then?
MS. MOGEN: Oh. Can I do that after the break?
MS. CREMER: Yes. I don't know that we were going to take the -- did you want to take the break now, Ms. Smith, or --

MS. SMITH: I'm sorry?
MS. CREMER: Did you need to take the break now, or did you mean in a bit and we'll finish up?

MS. SMITH: My thought was we would go ahead and finish with Ms. Gunderson's testimony. I apologize. And then we could address the question posed by Ms. Mogen.

MS. CREMER: Yes. So did you have any other questions for her?

MS. MOGEN: I do. One moment.
Q. (BY MS. MOGEN) What report -- how did you derive that a turbine had over 30 hours shadow flicker on a resident?
A. We have a third-party consultant, Epsilon, that did
a study for us.
Q. Will he be here to answer questions?
A. Yes. He is here.

MS. MOGEN: Okay. I'm finished. Thank you.
MS. SMITH: And may I ask a question? Is that
who you were referencing as Rob O'Neal? You said Ryan and, sorry, but we couldn't find a Ryan.

MS. MOGEN: Sorry. Just one moment. Robert.
MS. SMITH: Okay. That clarifies it for us.
Mr. O'Neal will be testifying next.
MS. CREMER: Ms. Kaaz, did you have any
questions?

## CROSS-EXAMINATION

BY MS. KAAZ:
Q. Are you the person $I$ talk to as to why they're using A26? And which turbine is that using an alternate for? A. I'm sorry. I'm not sure I understand. At this time A26 is an alternate turbine location.
Q. Okay. So are you using A26?
A. We don't have plans to at this time.
Q. Oh.

MS. KAAZ: No other questions.
MS. CREMER: Thank you. That would take us to Commission questions. And $I$ believe we start with Commissioner -- or Chair Fiegen.

CHAIRWOMAN FIEGEN: Thank you for coming, Ms. Gunderson.

The Proposed Decommissioning Condition, were you involved in drafting that?

THE WITNESS: Yes.
CHAIRWOMAN FIEGEN: Okay. And did you work with
Staff or Intervenors or anyone else in drafting this?
THE WITNESS: I worked with my attorney.
CHAIRWOMAN FIEGEN: Okay. So it certainly as part of the discussion we had yesterday is who's the owner?

THE WITNESS: Correct.
CHAIRWOMAN FIEGEN: And if Xcel Energy is the owner, that's where the decommissioning is, in my view, of course, and everybody else's view would be -- and I certainly appreciate you bringing this condition so we can actually use this as a template if we so choose.

Thank you.
THE WITNESS: Uh-huh.
MS. CREMER: Commissioner Hanson.
COMMISSIONER HANSON: Good morning.
THE WITNESS: Good morning.
COMMISSIONER HANSON: I think I heard that you brought some good news. Did we switch from a 500-foot radius to a 325 -foot radius?

THE WITNESS: Yes. We'd like the two shifts -or I should say the one that's beyond 325 to be approved.

COMMISSIONER HANSON: So are all of these locations now 325 foot as opposed to a 500-foot recommendation?

THE WITNESS: Except the one that was 360 .
COMMISSIONER HANSON: Okay. I'm going to piggyback just a little bit on Mrs. Kaaz's question because $I$ think she's concerned about under what circumstance an A26 site might be used.

So I ask that question of you.
THE WITNESS: Alternate turbine locations are available should we not be able to use one of the primary turbine locations. And so we would commit to only having three primary turbines around Kaaz's home. Right now A26 is an alternate.

So should we want to employ 67, 68, or 69 -- I'm sorry. Should we not want to use 67, 68, or 69, we may remove one of them and use $A 26$ in its place.

COMMISSIONER HANSON: Do you have knowledge as to the likelihood of that taking place?

THE WITNESS: I don't think it's very likely at this time.

COMMISSIONER HANSON: Okay.
THE WITNESS: But it's mostly during --
potentially construction activities or if another microwave beam path tower was installed and it happened to -- the path of that happened to be in this area, those would be, $I$ think, a couple of reasons that may come up that we don't know about right now that could cause us to need to shift.

COMMISSIONER HANSON: Okay. Thank you. I was just trying to get some piece of mind here. Appreciate that.

I'll see if $I$ have any other questions that I've written down.

In regards to the 325 foot previous, your testimony shows that Apex has been involved in 2,200 megawatts of wind development in the last nine years. Do you have an idea of what the radius has been on those facilities?

THE WITNESS: Of shifts?
COMMISSIONER HANSON: Correct.
THE WITNESS: Not all of them. We don't have a repository database with that specific information but $I$ have been involved with projects and I think every project $I$ have been involved in has required shifts in turbine locations.

COMMISSIONER HANSON: Do you know approximately what the typical footage is?

THE WITNESS: It does vary based on, you know -a project $I$ worked on in northwest Iowa there were microwave beam path towers installed, and -- after we had done our report and, therefore, we worked very closely with them to make sure that the turbine and its blades were out of that path.

And in some cases it could be several hundred feet that it would have to move. Could be 50 feet. It would just depend on where these towers were lining up and what that would be.

COMMISSIONER HANSON: In states where you have development, have there been orders similar to siting orders from PSCs, PUCs?

THE WITNESS: Most of the areas where I've developed projects that are currently operating have been where there's local permitting. And so it does vary, but it's typically been either within the parcel that it was permitted or a specific distance.

In another case it was no -- more than a specific distance unless you provide information to us that will help us determine if it's something that we administratively can do or if you would have to go back through and reapply through the Conditional Use Permit process.

COMMISSIONER HANSON: So are you testifying that
in different states the orders did not have a distance requirement similar to the one that we're discussing here?

THE WITNESS: Different than what we're -different than the 500 feet --

COMMISSIONER HANSON: 320 -- forgive me for talking over you.

That's correct. We're discussing a radius by which there's flexibility. And that's what I'm curious about from the standpoint of other states. If they have orders, what is typically the flexibility that they have in their orders?

THE WITNESS: It can vary even by county, not just state, in some states. And so in some it could be as big as the parcel that was permitted would be. We would have that flexibility to shift within that parcel. So it could be beyond 500 feet.

COMMISSIONER HANSON: Forgive me again. I'm searching for an answer to my question on specifically orders from a state.

I understand that there's local setbacks and local flexibility apparently in other areas, but do other states have in their orders a footage flexibility?

THE WITNESS: I believe that there are. I believe that Minnesota is one that has some flexibility,
but $I$ don't have direct knowledge of that.
COMMISSIONER HANSON: If you don't -- if you don't know, you don't know. Okay.

Thank you very much. Appreciate it. Those are all the questions.

MS. CREMER: Commissioner Nelson.
COMMISSIONER NELSON: Thank you for being here, and, very specifically, thank you for A15-3 and A15-4. Those maps were very, very helpful to me.

A couple of questions. Relating to A21, the decommissioning condition, I appreciate you taking a good stab at this and trying to find a creative answer to this very important question.

Assuming that Xcel buys the project, I understand what this would require. What would this require if Xcel then subsequently sells the project to someone else prior to decommissioning?

THE WITNESS: I believe that should they sell to somebody else, they would be selling -- it would be part of what the commitment is that they have made here to the PUC.

COMMISSIONER NELSON: Well, and obviously that's part of our struggle. Commitments are one thing, but actually having cash to do the deal is something else. And that's my concern.

I think through all of the questioning you've answered most of my questions as it related to A15-3. I think the only one that's not been answered is which alternative sites are now planned to be used?

Can you ID those for us, please.
THE WITNESS: I have it written in my notes. I'm not sure that I remember. I believe that there are four or five that are now planned to be used.

COMMISSIONER NELSON: Yes. And I need to know the numbers, and so if you need to consult notes, that's fine.

MS. SMITH: May we have just a second? I have one other question that $I$ want to ask before she went up that we may be able to address a potential question on the decommissioning? Is that all right?

Can we go off the record just a few minutes?
MS. CREMER: Yes.
MS. SMITH: Thank you.
(Discussion off the record.)

THE WITNESS: I have the information. Turbine A15, A16, A11, and A24.

COMMISSIONER NELSON: Thank you. I think that's all the questions I've got.

MR. RISLOV: If I may, did you consult with Xcel before drafting that condition?

THE WITNESS: Yes.
MR. RISLOV: And it's a bit curious because this Commission does have routine regulatory responsibility over all decommissioning of generation plants of regulated utilities.

So I was curious if for some reason they
indicated why they should be any different?
THE WITNESS: The information that I received from Xcel was that this was consistent and that they were fine with the provision that we showed them.

MR. RISLOV: Thank you.
MS. CREMER: Dakota Range, did you have any redirect?

MS. SMITH: I do have --

## REDIRECT EXAMINATION

BY MS. SMITH:
Q. In response to the comments, concern that potentially the project could be sold, would you -- would Dakota Range be okay with adding to the condition that if the project were sold, decommissioning, financial security, would have to be reexamined at that time?
A. Yes.
Q. And we would -- we can word it more appropriately, but it would be along those lines; is that correct?
A. Yes.
Q. And I think Mr. Rislov asked my other question about consulting with Xcel, but you did contact them. They have approved what you have shown them?
A. Yes.

MS. SMITH: I have no further questions.
MS. CREMER: Thank you.
Staff, did you have any recross?
MS. REISS: Yes. Just briefly, please.

## RECROSS-EXAMINATION

BY MS. REISS:
Q. Ms. Gunderson, is it your understanding that if this project were sold, Xcel would need to come before the Commission for approval for a transfer of the permit?

MS. SMITH: That calls for a legal conclusion. I mean, we can stipulate that if -- it really does call for a legal conclusion so $I$ guess that would be my objection.

MS. REISS: That's fine.
Q. Would you be able to clarify which turbines are being removed and moved?
A. Let's see. Yes.

On Exhibit A15- I believe it's 3, there are black-grayish dots, and it's indicating the turbines that we are planning to remove.

What's not shown with the black dot that we want to
remove now is 60A, but it would be A1, A2, A9, 24, 25, A19, A20, and A21. And I'm sorry. 49 as well. That's another that is not shown with a black dot.

MS. SMITH: If it would be helpful, we'd be happy to provide an updated map and a summary sheet listing that. A couple of the changes didn't come up, obviously, until after we filed this.

MS. REISS: Yes. That would be helpful. Thank you.

Staff has nothing further.
MS. CREMER: Thank you.
Ms. Mogen, did you have any questions of this
witness?
MS. MOGEN: No questions. Thank you.
MS. CREMER: And Ms. Kaaz.
MS. KAAZ: No questions.
MS. CREMER: Thank you.
With that, I believe you are done.
(The witness is excused.)
MS. SMITH: We have one more.
MS. CREMER: Okay. Go ahead.
MS. SMITH: So we would call Robert O'Neal.
MS. CREMER: Okay. I thought you meant you have
one more question for her.
MS. SMITH: I apologize.

MS. CREMER: So in that case it's 11:30, and we should probably take lunch now. So 1:15 we will reconvene.

I'm wrong on that. 1 o'clock. Thank you. (A short recess is taken.)

MS. CREMER: I'll call this hearing back into session.

Dakota Range, you may call your next witness.
MS. SMITH: We'd call Robert O'Neal. Robert O'Neal,
called as a witness, being first duly sworn in the above cause, testified under oath as follows:

DIRECT EXAMINATION
BY MS. SMITH:
Q. Mr. O'Neal, could you please introduce yourself to the Commission.
A. Sure. My name is Robert O'Neal. I'm a principal at Epsilon Associates. I've got a little over 30 years experience doing community sound level impact studies.

And $I$ run the acoustics group at our firm, and I sponsored the sound and the shadow flicker studies in the Application.
Q. And with respect to those studies and your testimony, are those found in Exhibits A5 and A5-1 with the studies in the Application. It will be in Volume 1.

It's hard to find them all.
A. I'm sorry. Could you say the numbers again?
Q. Sure. A5 and A5-1.
A. Right at the very back.

Yes.
Q. And can you just give an overview of your testimony, both your direct and your rebuttal?
A. Sure. So the -- my Direct Testimony, as I said, I sponsored the sound and the flicker studies. In broad terms, we studied potential sound level impacts of constructing the project, taking information of -- from the layout and all the engineering parameters and calculating an expected worst-case future sound levels at receptors throughout the project area. So calculating various sound levels.

And the same was true for shadow flicker, using the same layouts, same turbines, some engineering information, and some meteorological data. There's software program that looks at the geometry throughout of the course of the year is able to calculate potential shadow flicker, hours, minutes, at different locations. Q. And with respect to sound to start with, is it your understanding that Dakota Range and the PUC Staff have come to an agreement on a proposed condition that has been presented in Exhibit A18?
A. That's my understanding, yes.
Q. And just for reference, that's provision 27 of A18.

And with respect to that provision, based on the modeling that you've conducted for the project, will the project comply with the requirement set forth in Condition 27?
A. Yes, it will.
Q. And regarding the Grant County and Codington County sound or noise requirements, will the project also comply with those requirements as well?
A. It will comply with both of those.
Q. And with respect to sound and shadow flicker, the commitment was made -- is it your understanding that the commitment was made by Dakota Range to remain at 30 hours or less at nonparticipating residences?
A. That's my understanding of the commitment, yes.
Q. And based on your modeling that you conducted to date, will that commitment be satisfied?
A. It will be satisfied, yes.
Q. And that is in part based on -- I believe you were present when Ms. Gunderson testified; is that correct?
A. That is correct.
Q. And she noted there were two turbines that were removed from the layout due to shadow flicker concerns. Did you hear that?
A. That's right.
Q. And so with those two particular turbines removed, does that address the issue of any modeled levels of shadow flicker being above 30 hours per year at a nonparticipating residence?
A. Right. That addresses that.
Q. And Ms. Gunderson also spoke regarding four alternate turbines that would be activated. Based on the modeling that you conducted, what is the result with respect to those activated turbines?

Will they also meet the applicable requirements?
A. Sure. Using those alternate locations will not change my conclusions.
Q. And your conclude was that all of the nonparticipating residences would be 30 hours or less? A. That's right.
Q. And there was a question that was asked by Ms. Mogen regarding serrated trailing edges in your report. Would you please explain what those are and if they're being used for the project.
A. Absolutely.

So STE, or serrated trailing edges, is a component that manufacturers can include in their turbine blades, and what that does is reduces some of the turbulence coming off the blades and, therefore, reduces sound
levels.
So Dakota Range has committed to using that STE technology in this project, and our report assumes that commitment.
Q. Other than what we talked about today, if I asked you the questions in your testimony, would they remain the same?
A. Yes, they would.

MS. SMITH: I have no further questions.
MS. CREMER: Thank you.
Staff.
MS. EDWARDS: Nothing.
MS. CREMER: Ms. Kaaz, did you have any
questions?
MS. KAAZ: No, I don't.
MS. CREMER: Thank you.
Ms. Mogen?
MS. MOGEN: Yes, I do.
CROSS-EXAMINATION

BY MS. MOGEN:
Q. Mr. O'Neal, in your sound study on page 5-1, can you turn to that?
A. Okay. I'll need a little help understanding which exhibit that is.

MS. SMITH: I believe that is in the

Application, and it is either Appendix $P$.
MS. MOGEN: Sorry.
MS. SMITH: That's all right. And it is one of the appendices. I believe it is --

MS. MOGEN: I thought it was Appendix I.
MS. SMITH: It may be Appendix I. You may very well be correct.

MS. MOGEN: Okay.
A. Okay. I'm on page 5-1 of the sound study.
Q. Okay. In the middle of the first paragraph it starts, "A technical report."

Can you read that sentence, please.
A. "A technical report from Vestas was provided by Apex which documented the expected sound power levels associated with the Vestas V136-4.2 wind turbine." Q. Okay. Can you turn the page to 5-2.
A. Okay.
Q. On the bottom of the page there is the sound -source sound levels?
A. Yes. I see that.
Q. Can you read the first sentence?
A. "Octave band sound power levels for the Vestas V136-4.2 wind turbines calculated from the provided third octave band levels in technical report were input to the model."
Q. So you received technical reports from Vestas?
A. It's the same technical report that was referenced on the previous page. But yes.
Q. Okay. And who provided those to you?
A. Apex provided those.
Q. Okay. Then can we move on to this report was
provided -- you did the report or supervised it?
A. The sound study?
Q. Yes.
A. Yes. It was conducted under my supervision.
Q. On page 5-2 under Modeling Locations it starts with, "These sensitive receptors were modeled." Do you see that?

It's in the middle of that paragraph of Modeling Locations.
A. Yes. I see that.
Q. Can you finish that sentence?
A. "These sensitive receptors were modeled as discrete points at a height of 1.5 meters above ground level to mimic the ears of a typical standing person."
Q. Okay. And is 1.5 meters approximately 4.2 feet -or 4.92 feet?
A. I don't have my calculator handy, but that's approximate.
Q. That's what Google told me so --
A. That's approximately correct, yes.
Q. All right. What is the height of a nacelle?
A. The nacelle is at 82 meters.
Q. And how many feet is that?
A. I would need a calculator.
Q. 296 .

What is the dBA? I had asked this question in my Data Request, but I didn't make it clear enough. What is the $d B A$ noise level at the nacelle?
A. So to answer that question, it's -- what is provided by a manufacturer, which is required by standard, is what's called the sound power level. So it's not what's at the nacelle, what's at the ground. It's a --
Q. Please answer my question.
A. It's a --
Q. Please answer my question.

MS. SMITH: Excuse me. He's trying to answer
your question.
Q. I would like to know just the dBA at the nacelle.
A. I don't know what that number is.
Q. Okay. I have that for you. It is in --

MS. SMITH: I'm going to object. Any statements
of what the answer is, that's testimony.
MS. MOGEN: It's provided in the --
Q. I'm going to find it for you in the document.

Exhibit A2-7. Page 12.
A. I'm at that page now.
Q. No. 2. Can you read that, please. You can just read the first sentence.
A. "The sound power level of a typical modern utility scale wind turbine is on the order of 103 dBA but can be somewhat higher or lower depending on the details of the design and the rated power of the turbine."
Q. Okay. Thank you. How big is a nacelle?
A. You mean what are the physical dimensions?
Q. Do you have any idea what size that is?
A. I don't have the dimensions. I don't know.
Q. Okay. Okay. What is a comparative sound level at 103 dBA?
A. So as $I$ was trying to explain before, 103 decibels is not what one hears at the nacelle or on the ground or anywhere else. It's a rating --
Q. I asked -- please answer my question.

MS. SMITH: Excuse me. He's trying to answer your question.
Q. I would like to know what a sound -- a comparable sound level is at 103 dBA .

MS. CREMER: And I believe he will need to explain that.

MS. MOGEN: Okay.
A. It's not -- you can't make that same comparison. A sound power level is a rating of a certain physical instrument.

It's like a light bulb. These might be 100-watt light bulbs; right? But they're a 100-watt light bulb whether I'm standing underneath it or whether I'm in the back of the room. It's still a 100-watt light bulb. What I see - the intensity of it changes as I move away or get closer.

It's the same with the sound power rating system. So the turbines for this project have a sound power rating of 103.9 decibels, approximately 104 decibels, but that is a power rating. What one hears is nowhere near that once you -- because that sound propagates. It's just a rating.

So it would not be -- it would not be a comparison to say what's 103 decibel because there's nothing at the project that generates 103 decibels worth of sound. Q. Mr. O'Neal, in your report, Figure 3.1 there is a common indoor sound and a common outdoor sound, and it says sound pressure level dBA.

What's up there around the 100 mark, just right over the 100 mark, because we are just over the 100 mark also? A. Right. So, again, this is sound pressure level, which is what we hear. The sound power level of 103 is
not the same as this.

But to answer your question, a 100-decibel sound pressure level, that would be a jet flying over at 1,000 feet.
Q. Okay. Have you been -- have you physically been to this project?
A. I have not physically been to this project, no.
Q. So you have not visited and seen where Teresa Kaaz's home is placed in correlation to turbine 67, 68, 69, or A 26 ?
A. I have reviewed the maps so I understand where her home is in relation to the wind turbines.
Q. Okay. Exhibit A17 provided by Apex in a Data Request has elevations on it.
A. Just takes a minute to flip through these very large binders.

Okay. I'm at Exhibit A17.
Q. What is the elevation of turbine number 67?
A. Turbine 67 is listed with a base elevation of 1,976.9 feet.
Q. What is the elevation of Teresa's house?
A. I don't know exactly.
Q. Where would have you gotten that information to do this report?
A. Let's turn back to the report for a moment, if we will.

So I'm back at Appendix I. On page 5-2 is a discussion of the terrain elevation. So the terrain elevation for all locations throughout the site, any of the homes, et cetera, they were -- they came from a national elevation data set provided by the USGS, U.S. Geological Survey.
Q. From the USGS her elevation is 2,045. So when we look at a nacelle at 296 feet and the base elevation is 1,976, that would put the elevation of this nacelle at 2,272.

Do you want to check my math?
A. I guess I'm not going to either confirm or deny that.
Q. Okay.
A. What I'm going to say is the software takes that all into consideration. It takes in the elevation of the turbines and the elevation of all the homes in the area, and it does the calculations.
Q. I do understand that.

Do you -- so Teresa Kaaz's bedroom is on the second floor so that would raise her elevation?

MS. SMITH: Objection. Is there a question? MS. MOGEN: I'm getting there.
Q. Would Teresa Kaaz have the difference of 296 feet
between the nacelle and her second story bedroom window? A. So, as I said, the -- whatever the elevations are for her home and the turbines, those are all input to the model. The receptors that were calculated were based on first floor locations so the number in the report would be at her first floor.
Q. Okay. I'd like to move on to the shadow flicker report. And, again, did you do this report or supervise it?
A. It was prepared under my direction.
Q. Okay. On page -- it's Exhibit A5, page 9 of your testimony. Can you read that for me when you get there? A. I'm sorry. Give me the reference again, please. Q. A5, page 9.
A. Okay. I'm there.
Q. Can you read -- could you please explain what shadow flicker is. Can you read that answer?
A. So lines 3 through 9? Read the entire thing?
Q. Yes, please. Uh-huh.
A. "With respect to wind turbines, shadow flicker is an intermittent change in the intensity of light in a given area resulting from the operation of a wind turbine due to its interaction with the sun. While indoors an observer experiences repeated changes in the brightness of the room as shadows cast from the wind turbine blades
briefly pass by windows as the blades rotate. In order for this to occur the wind turbine must be operating, the sun must be shining, and the window must be within the shadow region of the wind turbine. Otherwise, there is no shadow flicker."
Q. For clarification, is there shadow flicker outside? A. There could be shadow flicker on the ground outside, yes.
Q. Okay. On Appendix J, 1-1 -- never mind. Excuse me. That's been established with the new exhibit that was submitted.

Let's go there. I'll ask another question. Appendix J, 1-1.
A. Okay.
Q. The last line, Modeling Results, will you read that, please.
A. "The modeling results are conservative in that
modeling receptors were treated as structures with windows on all sides (greenhouses) and the surrounding area was assumed to be without vegetation or structures (bare earth)."
Q. Was the greenhouse moving at 65 miles an hour? MS. SMITH: Objection. Relevancy. MS. CREMER: I didn't hear what you said. Was the what moving?

MS. MOGEN: The greenhouse moving at 65 miles per hour?

MS. CREMER: Okay. Then what was your objection?

MS. SMITH: Well, I'm not sure where this is going, but it's a vague question.

MS. MOGEN: In his report he cited the Epilepsy Foundation.

MS. SMITH: I'll just -- I'll withdraw the objection, hear what he says, and we'll go from there.

MS. CREMER: Thank you.
A. I mean, obviously, the greenhouse is not moving at 65 miles an hour. This is an analysis at homes, at stationary structures.
Q. That's -- thank you.

Looking at the Application Figure No. 5, the Constraints Map -- so in the Application, the Constraints Map, looks like this. Oh, Appendix A. Sorry. Figure 5 .
A. So the Application Appendix A?
Q. Yes. It's under Application in figures, and it is

Figure 5. You're in the right area.
A. Okay. I'm there.
Q. Do you see turbine number 67?
A. Yes, I do.
Q. Can you identify that little white spot there? Is
there a name on it? I don't know if there's a name on that. That's Teresa Kaaz's home. Okay.

Can you go to the flicker map of Appendix J? It's 3B?
A. Which figure number in Appendix J?
Q. $3-2 B$.
A. 3-2B. Yes, I'm there.
Q. Comparing the two maps, in the first map Teresa Kaaz's house is the white -- her property is the white box. It is back in the furthest northwest corner.
A. Yes.
Q. On the flicker map is the box in the furthest northwest corner?
A. It may be helpful to reference the receptor ID numbers which are contained in an earlier figure in the report.
Q. I believe it's 1698.
A. That's correct. And you can see that from

Figure $3-1 B$ in the shadow flicker report. You can see Ms. Kaaz's house at ID number 1698, which is southwest of turbine 67.
Q. Uh-huh. What are you referring to? What --
A. I'm looking at Figure 3-1B, as in boy, in the shadow flicker study, which is Appendix J. That shows the same structures that were used in the model, but it puts an
identification number, number 1698. I think it's the one you're talking about.
Q. Correct. And does that placement look correct to you even on this map?
A. Yes, it does.
Q. Let's compare all three of those maps. It seems to me that $3-1 B$ is to the west of the section line. $3-2 B$ is south of the property line.
A. No. Those locations are in the same spot. I would offer they are correct.
Q. Now on the flicker map with Teresa's house identified, $I$ blew that $u p$. Can $I$ get the $M-6 b$ exhibit? Well, actually it's in there. It should be in the file; is that correct?

So Exhibit M-6b.
A. I've been handed M-6b. Does it look like this?
Q. Yes.
A. Does that receptor --

MS. CREMER: I'm going to interrupt here for a minute. So is this an exhibit -- so it hasn't been admitted; correct?

MS. SMITH: It has not been admitted.
MS. CREMER: So my question would be is this something that's already in the record that was one of your maps that we could look at, or what are we talking
about here? And not that you would know but --
MS. SMITH: I'll take a shot at it.
My understanding is it's a blowup of one of the figures that's in the report, with the shadow flicker report, but $I$ believe Ms. Mogen would have to confirm that.

MS. CREMER: Okay. So is this a blowup of one of the maps in the Application?

MS. MOGEN: 3-2B.
MS. CREMER: 3-2B. Okay. Which is already admitted.

MS. SMITH: We would object to admitting this because it isn't an accurate representation of what was shown in the original figure.

The original figure is at a different scale. This has been blown up and distorted by the blowup. And so we would object to using that. We would ask that the exhibit that has been admitted be used. I think the same point can be made.

MS. CREMER: Can it be used for illustrative purposes blown up like this?

MS. SMITH: Not really because it's not at scale. We have discussed this exhibit with our expert to understand if he knew where this came from, and he was the one who was able to tell us that it was a blowup that
had been distorted by the expansion of the map.
COMMISSIONER NELSON: I'm going to interject, if I could.

I would sustain the objection. It's clear that this has been elongated, and $I$ don't see that it can be used for any accurate demonstration.

MS. CREMER: So I would say if you wanted to use the one that's been admitted to ask your questions -MS. MOGEN: Okay. Okay.
Q. Going back to the Constraints Map, this one in the Application. You are looking at that?
A. I'm there.
Q. Yep. Can you go over and look at turbine number 7?
A. Okay. I see it.
Q. There is a little white nonparticipator there.

There's two of them. Do you see those?
A. I see a couple to the west of turbine 7 .
Q. Yes. That's correct.
A. Okay. I see that.
Q. Can you give me the receptor numbers for those?

MS. SMITH: And just for ease, if you would like
to remove the map from the booklet, please feel free to do so. We'll fix it.
A. I don't see any explicit receptors in those two blank white spaces. I don't know if the blank white
space in the Constraints Map means there's a house there or if that's just a parcel of land. I don't know. But I do not see any residential receptors within those two white parcels due west of turbine 7 .
Q. That's one of my friends' houses. maps?
A. Well, that's what $I$ was just looking at. I'm looking at the shadow flickers maps of receptors in Appendix J. So, for example, Figure 3-1A shows the receptors. And there are some southwest of turbine 7 and slightly north or -- northwest of turbine 7. Receptors 1985, 1968, for example.
Q. Are those receptors in the same place as on the Constraints Map?
A. No, they are not.
Q. Is Apex picking on my friends?

How many more --
MS. SMITH: Objection.
Q. How many more are missing off this map?

MS. SMITH: That's a mischaracterization of the testimony. He didn't say that it was missing. He was pointing to a different receptor.

MS. CREMER: I would sustain that objection.
MS. MOGEN: I'm done.

MS. CREMER: Ms. Kaaz, did you have questions then?

## CROSS-EXAMINATION

BY MS. KAAZ:
Q. How many hours of flicker are on my property as an average?
A. I can give you the number. I'm looking at, again, Appendix $J$ in the Application, which has the shadow flicker modeling report. And your home, as I understand it, is the receptor ID number 1698. 1698.

So if you turn to Appendix B in that report, there's a table of all the receptors and the expected shadow flicker hours per year. And your location 1698 has approximately 27 hours per year of expected shadow flicker.
Q. How about the trees and the shop?
A. I'm not sure $I$ understand the question.
Q. There's a home, shop, and the trees. The shadow is on the shop, the trees, and the house. So the house has an average of 27 hours of flicker; is that correct?

But the shop is more, and the trees are more; is that correct?
A. I can't speak to the shop. I'm not exactly sure where that is.

With regard to the trees, you have to remember what

I said at the beginning. This is a bare earth scenario. We assume -- for shadow flicker, we assume no trees. The effect of trees would actually be to block shadow flicker and -- in those directions.
Q. How about on the northern part of the property line?
A. I don't have your property boundary overlaid on this figure. Is there perhaps another figure in the record that shows your property line?
Q. I have here A17, the map that was provided to me by Apex. This is an enlargement. It's not a blowup so it should be precise.

Can we show that so they understand what I'm talking about?

MS. CREMER: Have you shown Dakota Range this yet? Have you shown them your enlargement?

MS. KAAZ: It's in the file marked A17 so you can look at it on your --

MS. CREMER: Right. But I would like to confirm that that is an accurate enlargement.

MS. SMITH: And, Ms. Kaaz, is your question just can we refer to this map, have him look at this map? Is that what you're asking?

MS. KAAZ: Yeah. That's fine. I think it's the same as this one.

MS. SMITH: Yeah. This is the map that you're
talking about. Yep. That's fine.
MS. KAAZ: Could you share that with him so he could look at that map?

MS. SMITH: We helped him -- yeah. We located it for him.
A. I do have a copy from the binder here.
Q. Okay. I apologize. I don't know how to go any farther with this.

Are you still going to answer me?
A. I think I'm ready to try to attempt to give you an answer.
Q. Okay. I appreciate that.
A. I think, if $I$ recall, the question was what would I estimate potential shadow flicker to be on the north side of your property up at the northern property line? Q. Yes.
A. So for that $I$ would look at Figure $3-2 B$ in the shadow flicker report which has the contours, helped out by Exhibit A17, I believe, which shows your property line.

From that $I$ would estimate perhaps up to 50 hours per year up at that property line -- well, essentially the road there. 156 th Street.
Q. I might be wrong but did not Apex state that they would voluntarily make sure our flicker was closer to

30 hours? So is my property --
MS. SMITH: I'm going to object. That's a
misstatement of testimony.
Q. -- average?

MS. CREMER: And, again -- you could ask this witness what his understanding would be of the condition. Q. What is your understanding of the amount of flicker that Dakota Range has said is an average that they volunteered?
A. So my understanding is that Dakota Range has agreed to limit shadow flicker at a nonparticipating residence at the residence to 30 hours per year or less. That's at the residence.
Q. Does my residence start at my property line?
A. Well, I think the residence is -- the home is the actual residence.

MS. KAAZ: No further questions.
MS. CREMER: Thank you.
Commissioner Nelson.
COMMISSIONER NELSON: Thank you.
Thank you for being here. I'm trying to follow things on the map, and $I$ do need to follow up on Ms. Mogen's question regarding a potential residence about a half-mile west of turbine 7 .

It's not listed as a potential receptor, but
it's pretty clear to me that there is a residence there. So I guess the question would be why that was not identified as a potential receptor.

THE WITNESS: I'm just taking a moment to flip back to Figure 3-1A, which has the receptor map there.

So I see an area to the west of 7 which has some lighter colors in it. I don't know -- again, for these analyses we relied on the receptor data file that was assembled by Apex and provided to us. So I was relying on their receptor file.

COMMISSIONER NELSON: Okay.
The other question, the model that you use for shadow flicker, obviously flicker's going to be impacted by wind direction; correct?

THE WITNESS: That's correct.
COMMISSIONER NELSON: And wind speed; correct?
THE WITNESS: Wind speed, not very much.
Because all you need to know is are the turbines turning? Is it above cut-in speed? Which is most of the year.

COMMISSIONER NELSON: But doesn't wind speed affect the angle of the -- the pitch of the blade, and, therefore, wouldn't the pitch of the blade impact flicker?

Or is that so minuscule that it doesn't matter?
THE WITNESS: That's where I would go with that,
frankly. The software assumes that you're looking at the full extent of the blade. It does not try to microsight it so it's turned a little bit. It assumes a full blade.

COMMISSIONER NELSON: So in that regard it
really is maybe a more conservative estimate than what reality might show; is that correct?

THE WITNESS: That's correct. Yes.
COMMISSIONER NELSON: Thank you. I think that's all the questions I have.

MS. CREMER: Thank you.
Commissioner Fiegen.
CHAIRWOMAN FIEGEN: Just to clarify, in your
Rebuttal Testimony I think you addressed a question maybe that Jon Thurber had. And so it's on page 1 of your Rebuttal Testimony.

And at that last question could you read that
and your response on your Rebuttal Testimony?
THE WITNESS: Could you help me out with the exhibit number for that, please.

CHAIRWOMAN FIEGEN: Oh, I'm sorry. I don't even know what your Rebuttal Testimony -- A6, I guess.

THE WITNESS: That's a different volume.
MS. SMITH: It is a different volume. Sorry.
THE WITNESS: Oh, no problem.
CHAIRWOMAN FIEGEN: Otherwise, I can certainly
read it and ask you the question.
THE WITNESS: No, no. That's okay. I can find it.

In Exhibit A6, my Prefiled Rebuttal Testimony from May 21. I have it.

CHAIRWOMAN FIEGEN: Great. And then on page 1 the very last question starting on line 27 and then your response.

THE WITNESS: Yes. I see that.
CHAIRWOMAN FIEGEN: Could you read that.
THE WITNESS: Oh, sure. Read the question and the answer?
"Staff requests that Dakota Range commit to mitigating shadow flicker for any residence that experiences shadow flicker in excess of 30 hours per year based on actual operation. Is it your understanding that Dakota Range is willing to make such a commitment?" And then my answer was, "Yes."

CHAIRWOMAN FIEGEN: Okay. Can you also read in -- let's see. We have a new exhibit, which are the conditions, A18. No. 28.

THE WITNESS: I don't have A18.
CHAIRWOMAN FIEGEN: You know what. I'll just
read it to you. No. 28, "The Applicant will take reasonable steps to mitigate shadow flicker concerns at
the residence that could experience shadow flicker levels above 30 hours per year."

In your testimony that you were just talking about -- or your responses to some questions you talked about nonparticipating. But when I read this it looks like it's nonparticipating and participating. Is that correct?

THE WITNESS: So I'm not -- the modeling shows that 11 locations could be over 30 hours per year, and those are all participating landowners. My understanding of the commitments -- I could be wrong -- is that Dakota Range is going to offer them -- talk to them and see if they wanted mitigation in the form of screening or plantings or so forth, but there was not -- I guess, committed to talk to them.

MS. SMITH: You're looking at me like I should answer, Commissioner. Do you want me to?

CHAIRWOMAN FIEGEN: Sure. I just need to have an understanding of that condition.

MS. SMITH: So the condition is referencing residences generically, in part because it's accounting for the fact that the commitment still is there to be under 30 hours at non -- nonparticipating residences. It's only nonparticipating residences. So we just used residences in case there was any question of
who they were offering mitigation to if it went over 30 hours at any point in the future.

So the commitment is if it goes over 30 hours, there would be steps, reasonable steps, taken to mitigate. I believe I'm accurately representing that.

CHAIRWOMAN FIEGEN: That's only for
nonparticipating?
MS. SMITH: No.
CHAIRWOMAN FIEGEN: For all.
MS. SMITH: It says residences. It means residences. It means whoever that may affect.

CHAIRWOMAN FIEGEN: Perfect. That's what I just wanted to make sure.

The very last question, $I$ think it's in the information here, but $I$ just want you to help me understand since you are a sound expert. Help me understand the accumulation of sound when you have wind towers surrounding your residence.

Is there accumulation where it's louder than when you just have one?

THE WITNESS: That's a great question.
So the standard that we use, that all noise consultants use, to do these calculations is the ISO 9613-2 standard, which you may have seen some reports or heard. That standard forces us to take the
conservative approach that the wind is blowing from every turbine towards every receptor at the same time.

CHAIRWOMAN FIEGEN: Thank you.
THE WITNESS: So the calculations always assume that a particular home is downwind of any given receptor simultaneously. So if you have three turbines to the east and one or two turbines to the west, it assumes the wind is blowing from the east and the west at the same time.

So it is a measure of conservatism in the calculations.

CHAIRWOMAN FIEGEN: Okay. I just wanted to make sure that that was on the record.

Thank you.
MS. CREMER: Commissioner Hanson.

COMMISSIONER HANSON: Thank you.

Good afternoon, Mr. O'Neal.
THE WITNESS: Good afternoon.
COMMISSIONER HANSON: I appreciate you being here and the information that you provided was easy for a layperson -- at least for this layperson to read and it was well thought out and $I$ appreciate that very, very much.

I'm not going to ask you any questions. I'm just going to request of the Applicant if they will --
having viewed the discussions that have taken place and especially with Ms. Gunderson's testimony that A26 is very unlikely to be used, if you would consider removing that from the plan.

You don't have to do that at this juncture. However, it would assist from a standpoint of -- I can't speak for my fellow Commissioners because they occasionally -- only occasionally agree with me on things. So it would eliminate some discussion later on when we're looking at this process some days from now.

Thank you.
MS. SMITH: Yes. We will consider that and come back to you, Commissioner.

COMMISSIONER HANSON: Thank you.
No further questions.
MS. CREMER: Commissioner Nelson.
COMMISSIONER NELSON: I hesitate to ask this question because by asking it it means I have to understand your answer, but $I$ think $I$ need to.

Can you help me understand this difference between sound pressure and sound power? And that means my fellow Commissioners have to understand it also.

THE WITNESS: Absolutely.
In broad terms sound power is calculated from sound pressure level measurements. So when I take my
meter out to measure a source of sound, anything, I take a series of measurements around it at a known distance, a referenced distance, 25,50 feet, 1 meter, whatever that is, and there's methodologies that we follow to then take those measurements and the dimensions of whatever we're measuring, and that information that goes into the standard that then does a series of calculations, that converts it to a sound power.

And what that does is it's useful to allow people to compare different products from a noise perspective or sound perspective. So for the wind turbine industry it's great because there's a rigorous standard that every turbine manufacturer has to use to test, take their sound measurements of their turbine, calculate them into a sound power.

So it's very easy for us to say Vestas has this sound power, GE has this sound power, and it's really comparable. That sound power is calculated from sound pressure.

Does that help?
COMMISSIONER NELSON: Actually I could understand that. So now I'm going to ask a follow-up question.

So when we hear just a typical reference that such and such is 60 decibels, is that power, or is that
pressure?
THE WITNESS: That is pressure. And to be accurate, someone should say it's 60 decibels at $X$ feet, 25 feet, 50 feet. That would be the proper way to say that.

COMMISSIONER NELSON: Thank you. That's as far as I'm going to go.

THE WITNESS: Thank you.
MS. CREMER: Do you have any redirect?
MS. SMITH: I do not.
MS. CREMER: And, Staff, based on Commission
questions?
MS. REISS: No.
MS. CREMER: And, Ms. Mogen, based on Commission questions?

MS. MOGEN: No.
MS. CREMER: Ms. Kaaz.
MS . KAAZ: No.
MS. CREMER: Thank you. You are excused. You may step down.

And, Dakota Range, you can tell us what your next step is.
(The witness is excused.)
MS. SMITH: We may call rebuttal witnesses particularly to address a couple of questions that were
raised earlier in the hearing, but for now we have put in all of our witness testimony.

MS. CREMER: So do you want to call them now, or do you want to wait?

MS. SMITH: No. We'll wait.
MS. CREMER: All right. Staff -- or no. Yes.
Staff you are next. Do you need a minute?
Let's just reconvene at 2 o'clock.
(A short recess is taken.)
MS. CREMER: Staff, when you're ready.
MS. EDWARDS: Staff calls David Hessler.
David Hessler,
called as a witness, being first duly sworn in the above cause, testified under oath as follows:

## DIRECT EXAMINATION

BY MS. EDWARDS:
Q. Mr. Hessler, will you please introduce yourself for the record and begin by hitting the green button on the microphone.
A. Yes. My name is David Hessler. I'm the vice president of Hessler Associates. It's a family-owned acoustical engineering company started by my father. And we've specialized in the acoustical design of power generation facilities for almost 40 years now, and $I$ have about 27 years of experience.
Q. Thank you. You just covered my first three questions. So did you file prefiled testimony in this docket?
A. Yes, I did.
Q. Do you have any additions, corrections, or changes to make to that testimony?
A. No.
Q. Are you familiar with the condition agreed upon by Staff and the Applicant in this proceeding regarding noise levels?
A. Yes, I am. I drafted an initial condition, and it went through -- back and forth through a number of iterations that ended up with the final version the other day, and I'm good with that.

MS. EDWARDS: All right. No further questions. I will tender him for cross.

MS. CREMER: Thank you.
And, ironically, I'm having a hard time hearing you because of the noise of the air conditioner. So if you could either scoot the mic. closer or -- yeah. I would appreciate that. Thank you.

I will begin with Dakota Range.

## CROSS-EXAMINATION

BY MS. SMITH:
Q. And I may be asking what Ms. Edwards just asked, but
did you indicate that you agreed with the condition that had been imposed in A18?
A. Yes. The latest version of the condition that came out yesterday is good, in my opinion.

MS. SMITH: Okay. I have no further questions.
MS. CREMER: Thank you.
Ms. Kaaz.
MS. KAAZ: No, I don't.
MS. CREMER: Ms. Mogen.
MS. MOGEN: No.
MS. CREMER: Yes. Commissioner questions. I'm just trying to remember who to start with.

Is it Chair Fiegen?
CHAIRWOMAN FIEGEN: I can.
MS. CREMER: Commissioner Hanson, she overrules you so you will go first.

CHAIRWOMAN FIEGEN: I have no questions, but welcome to South Dakota. It's nice to see you in person.

THE WITNESS: It's much better than being on the phone, a disembodied voice.

CHAIRWOMAN FIEGEN: Right. And then you can see how mean Commissioner Hanson is in his questioning because he's really the first Commissioner to ask questions if he has any. But I'm going to take a pass this time.

COMMISSIONER HANSON: Such comradery.
Mr. Hessler, welcome.
THE WITNESS: Thank you.
COMMISSIONER HANSON: I read your prefiled -your Direct Testimony some time ago as I did with the others so $I$ was counting on someone asking questions so I could review all my highlighted areas.

And I see I have an exclamation point on page 5 after the question, "Is your suggested long-term average sound level at 45 resident currently being met?" And I wrote the --
(Discussion off the record.)
COMMISSIONER HANSON: Curious that you would use the very same modeling, that you seem to agree with the 50 dBA to an extent, but you would bring it all the way down to 40 dBA ; is that correct?

THE WITNESS: What we've found from doing compliance tests on completed wind projects is that once the level at someone's house is 40 or less it's generally so quiet in absolute terms that the complaints are very, very rare.

So what we've recommended in different papers and conferences and things is that 45 is good as a fair regulatory limit but that 40 should be considered an ideal design goal. It's really where every project
should be, but there's very, very few that can actually accomplish that because it requires enormous setbacks. So we feel that 45 is a fair limit, regulatory limit. COMMISSIONER HANSON: Is there an industry standard?

THE WITNESS: No, there isn't. Wind turbines are, oh, a subset of power generation noise unto themselves. And what it boils down to is that the whole range from practically no impact to a serious impact is really 10 dBA wide, 40 to 50 .

At 40, like I say, we've found very few people object to it. At 50 a lot of people object. It's that small of a range. So that's totally different than a normal power plant or anything else.

COMMISSIONER HANSON: Can you give us an approximation of an urban setting where a next door neighbor's central air conditioning unit is outside their home. I know that this is a wide range.

The neighbor who's affected does not have the central air on their property. Their bedroom is on the first floor 10 feet, 20 feet away, 15 feet away from the air conditioner. Any idea what dBA that would be?

THE WITNESS: That sounds like my house and my neighbor's house. I think it would be -- I would say that's 55, something like that.

COMMISSIONER HANSON: When I was a kid I grew up two houses -- three houses away from a railroad track. And one time a friend was sleeping over, and he woke up in the middle of the night, what's that, what's that?

And $I$ didn't know what he was talking about, and then the train whistle went off. I had become so accustomed to it $I$ didn't even hear it. How loud is a train whistle?

THE WITNESS: I just heard that this morning at the hotel.

COMMISSIONER HANSON: Did it wake you up?
THE WITNESS: Inside I would say that was -- I'd say that was probably about 55.

COMMISSIONER HANSON: Really?
THE WITNESS: Yeah. Inside. Yeah.
COMMISSIONER HANSON: Thank you for your testimony. Appreciate it.

THE WITNESS: Are you sure you don't want to go over power and pressure again?

COMMISSIONER HANSON: I look at it like electricity; voltage and watts.

Thanks.
THE WITNESS: All right.
MS. CREMER: Commissioner Nelson.
COMMISSIONER NELSON: Yes. In Pierre we put our hotels directly next to the railroad tracks.

THE WITNESS: Very nice.
COMMISSIONER NELSON: On page 8 of your Direct Testimony where you were talking about your observations of Cooper's work you make the statement, "However, Cooper's experimental results now convince me that a minority of people do have a sensitivity to the minute pressure pulsations associated with the blade passing frequency."

Is that sensitivity manifested in illness or in anxiety? Or something else?

THE WITNESS: There's been a number of symptoms reported to be associated with that. It's -- I would say principally it's a kind of feeling of vertigo or mild nausea or disorientation or sleep disturbance. Things of that nature have been reported.

COMMISSIONER NELSON: And so you concur that this minute pressure pulsations can cause those types of effects in some people; is that correct?

THE WITNESS: Yeah. I was skeptical of that for many years, but $I$ think that there are -- or there is a very small minority of people that are sensitive to it and that are bothered. But it's evidently a very small minority because if there were -- it was a common thing, this problem would be evident at every wind project and
they're all over the place and this only happens very rarely.

So I think it exists, but it's a rarity. So there's a risk here. There's no way to put a number on it, though.

COMMISSIONER NELSON: Were you here when Dr. Roberts testified yesterday?

THE WITNESS: No.
COMMISSIONER NELSON: In the questioning that I had with him I asked a question along the line of we know that anxiety can manifest itself in symptoms and that some people are simply anxious about the presence of wind turbines, and so that anxiety then may manifest itself in symptoms.

So my question for you is do you believe that the things that you were talking about that people have experienced, is that anxiety related, or is that literally related to the pulsations on the body?

THE WITNESS: Yeah. I think it's a direct consequence of some sound pulsation. At least that's the outcome of the Cooper study where in a nutshell he plays -- a double-blind experiment involving people that had complained about this issue and others that haven't.

And he played a sound recorded inside of a house at a wind turbine, wind farm, that -- it was inaudible,
but they played this recording. And the people that were at that wind farm and had been complaining about it were able to tell with 100 percent accuracy when it was being played and when it wasn't. And the control group never heard anything, never felt anything. I feel like that's very compelling evidence.

Now why it happens and exactly what it is, I don't think is known yet.

COMMISSIONER NELSON: Thank you.
MS. CREMER: Staff, do you have any redirect?
REDIRECT EXAMINATION
BY MS. EDWARDS:
Q. Mr. Hessler, are you aware of any regulatory limits of 40 dBA in any jurisdiction with which you are familiar?
A. No. That's very low, and it would be very rare for any project to be able to make that.

MS. EDWARDS: Nothing further.
MS. CREMER: Dakota Range.
MS. SMITH: I don't have anything. Thank you.
MS. CREMER: Ms. Kaaz.

## CROSS-EXAMINATION

BY MS. KAAZ:
Q. I apologize if $I$ overstate. I'm just going to ask a question.

In Clark with a three-quarter-mile setback what is the average dBA going to be at a home at a three-quarter-mile setback?

MS. SMITH: Objection. That's outside of this record. I believe they're referencing a different project.

MS. KAAZ: Did he not testify for Clark also?
MS. CREMER: Yes. But the relevancy here would be minimal so $I$ would sustain.

So you can ask another question.
MS. KAAZ: Okay.
Q. The Dakota Range project, if a turbine is, say, three-quarter mile away from a residence home, what is the expected dBA at that property with that distance?

MS. SMITH: Objection. I don't think there's a foundation to address that question. There's nothing in the record to support the answer.

MS. CREMER: I'm going to overrule. If he can answer, he can.
A. Well, it's very difficult to answer that. If it were just one turbine by itself, that number could be calculated. But in a normal wind farm there's a number of different turbines and they're all adding up and they're all contributing at some point of interest.

And that's why we do noise modeling to figure out
what the answer is. So I don't know off the top of my head.
Q. How about if $I$ said three turbines at three-quarters of a mile setting 1,000 feet apart or how far?
A. That would still involve calculations. I can't tell you.

MS. KAAZ: No further questions.
MS. CREMER: Thank you.
Ms. Mogen.
MS. MOGEN: No questions.
MS. CREMER: Anything, Staff? Final redirect?
MS. EDWARDS: No.
MS. CREMER: You are --
COMMISSIONER NELSON: If --
MS. CREMER: Sorry. I didn't see you.
COMMISSIONER NELSON: You are very close to
stepping down.
If $I$ could ask, I'm going to try to ask
Ms. Kaaz's question in a way that $I$ think would be helpful for us.

Would it be accurate that in any setting a wind turbine three-quarters of a mile away would have less -the dBA level at the receptor would be lower than one that is 1,000 feet away?

THE WITNESS: Yeah. Certainly. I would expect
it to be down -- I'm guessing, but somewhere 40 or maybe in the $30 s$ at that kind of distance. Very quiet. Much quieter than this room.

COMMISSIONER NELSON: Thank you.
MS. CREMER: You may step down.
(The witness is excused.)
MS. CREMER: And, Staff, you can call your next witness.

MS. EDWARDS: Staff calls David Lawrence.
David Lawrence,
called as a witness, being first duly sworn in the above cause, testified under oath as follows:

DIRECT EXAMINATION
BY MS. EDWARDS:
Q. Mr. Lawrence, please introduce yourself for the record.
A. My name is David Lawrence. I'm a real property appraiser with an MAI, SRA, SRWA and AI --
(Discussion off the record.)
A. I'm sorry. I should have just said I'm a real property appraiser, but $I$ have designation with MAI, SRA, SRWA and an AIRRS.

MS. CREMER: And then if you could either pull yourself closer to the mic. or the mic. closer to you, that would help.

Thank you.
THE WITNESS: Sure.
Q. How did you become involved in this docket?
A. I was contacted by Staff at the PUC.
Q. Have you testified before the PUC before?
A. Yes, I have.
Q. Did you file prefiled testimony in this docket?
A. Yes, I have.
Q. Did you file Prefiled Rebuttal Testimony -- or Surrebuttal Testimony in this docket?
A. Yes, I have.
Q. At this time do you have any additions, corrections, or changes to make to that testimony?
A. Not at this time.

MS. EDWARDS: No further questions.
And Staff would tender Mr. Lawrence for cross.
MS. CREMER: Thank you.
Dakota Range.
MS. AGRIMONTI: Thank you.

## CROSS-EXAMINATION

BY MS. AGRIMONTI:
Q. Good afternoon, Mr. Lawrence.
A. Good afternoon.
Q. I'd like to ask you a couple of questions about your Surrebuttal Testimony that was filed last Friday. That
included some testimony and then Exhibit 1; is that correct?
A. That's correct.
Q. Could you please get Exhibit 1 before you.
A. Can you reference where that would be?
Q. It would be in the Staff Exhibits, No. 6.

MS. CREMER: I think they might be to your left on the ledge there maybe.
A. All right. I have Exhibit 6 in front of me.
Q. All right. Do you have Exhibit 1 to Exhibit 6 before you?
A. I'm sorry. What did you say?
Q. Exhibit 1 to Exhibit 6. It's a table titled Rural Residential Transaction Summary Table.

As part of your Surrebuttal Testimony you provided information regarding six rural residential sales BK-1 through 5 and 7 ?
A. That's correct.
Q. And is this table intended to be the summary of your analysis?
A. It's part of my analysis.
Q. Okay.
A. But there's another summary of tables. But, yes, this is part of the summary of my analysis.
Q. All right. If I look to the far right-hand column,
is it fair to say that you found no measurable effects of proximity of wind turbines for any and all of these residential sales?
A. For the residential sales in Brookings County I found no measurable effects.

MS. AGRIMONTI: I have no further questions.
MS. CREMER: Thank you.
Ms. Mogen.
MS. MOGEN: Thank you.

## CROSS-EXAMINATION

BY MS. MOGEN:
Q. Mr. Lawrence, have you evaluated properties that no longer qualify for $F H A$ loans, financing?
A. Yes. I have appraised homes that were for $F H A$ financing that did not qualify.
Q. Why did they no longer qualify? Can you give me an example?
A. An example I'm specifically thinking of was a damaged property case with an overhead transmission line which was -- there was a number of things going on with the property, but it was within the fall zone, which disqualified it for health safety reasons for the FHA financing criteria.
Q. Does the FHA regularly update its guidelines?
A. And when we're talking about FHA guidelines, there
are minimum property requirements if you're going to ask for $F H A$ financing at the appraisal process that the appraisal must meet. And, yes, they do update these regularly.
Q. Can you search the MLS for a wonderful feature of wind turbines?

MS. AGRIMONTI: Objection. Argumentative.
Q. Can you search the MLS for a feature of wind turbines?
A. No. I'm not aware of how to do that.
Q. How do you find properties hosting wind turbines?
A. Through research. It's not a -- it's not an easy process to identify properties that are in proximity to wind turbines. There's ways to do it through county records, MLS, if they're available, by searching property sales that are near or within wind projects.

And then also sometimes counties will have GIS
systems that you can use to try to provide leads for some type of sales.

MS. MOGEN: Thank you. Thank you.
MS. CREMER: Ms. Kaaz.
MS. KAAZ: No. I don't have any questions.
MS. CREMER: Thank you.
Commissioner Hanson.
COMMISSIONER HANSON: Good afternoon,

Mr. Lawrence.
THE WITNESS: Good afternoon.
COMMISSIONER HANSON: Appreciate you being here and the information you provided. I find it interesting. I'm curious. On your Direct Testimony, page 6, bottom of the page you give four concerns that you have with the market impact analysis that was presented by the Applicant and you state as your fourth reason for concern that the studies that were used do not reveal a consistent consensus among the authors about potential impacts of wind towers, turbines, and wind projects on property values.

Are you aware of any such study that exists?
THE WITNESS: Study that exists that --
COMMISSIONER HANSON: That would comply with
that fourth concern.
THE WITNESS: That --
COMMISSIONER HANSON: You're referencing studies that were used by the Applicant.

THE WITNESS: Uh-huh.
COMMISSIONER HANSON: And I'm wondering, you said that the studies that were used by the Applicant have a number of -- you expressed four concerns, and your fourth one was what $I$ just read.

THE WITNESS: Uh-huh.

COMMISSIONER HANSON: And I'm wondering if you are aware of any study since the -- since the ones that were used by the Applicant to meet that standard that you set forth, are you aware of any study that does meet that standard, that concern that you expressed?

THE WITNESS: And the concern that I expressed there was that they were inconsistent. I'm sorry. I don't have that in front of me.

COMMISSIONER HANSON: You state that the studies do not reveal a consistent consensus among the authors of those about potential impacts of wind towers, turbines, wind projects on property values.

THE WITNESS: Okay. No. I'm not aware of any additional studies that are consistent.

COMMISSIONER HANSON: It seems that as $I$ went through your testimony that your concern is that there isn't any evidence to show that there is not a negative effect.

## Is that accurate?

THE WITNESS: I would say yes, along a time line of my testimony. When I originally developed my Direct Testimony $I$ identified 13 sales in South Dakota, which at that time I didn't have any time to investigate those sales.

Hence, why I provided my Surrebuttal Testimony.

Because between early May and now I was able to look into those sales to see what the evidence was.

COMMISSIONER HANSON: And how would you -- how would you now conclude the effect on a property value such as Ms. Kaaz? Did you go to that -- did you get down that granular where you have an opinion on how it -- and I understand appraisal work and so it's not really fair to ask that question of you, but do you have some --

I don't know what amount of work you did in relationship to that property or not. But can you give us some idea on your belief on what the effect of this project would have on her property?

THE WITNESS: Okay. And I'm not familiar with her property. I didn't look at it specifically.

COMMISSIONER HANSON: Okay.
THE WITNESS: How close are the wind turbines to the property?

COMMISSIONER HANSON: I forgot.
THE WITNESS: Just $I$ can give you a quick
overview of some of the things that I did for my research. When I set out I randomly selected some -well, there was a few properties that $I$ selected with --

I've heard the term nonparticipating wind -- or landowners, and $I$ would classify those as landowners that owned their property prior to the installation of a wind
tower. And I went to some of those properties and talked to landowners and walked the property. And it seemed pretty consistent.

If you're a landowner near wind towers that have not purchased the property, you have a lot of complaints about noise, you know, visibility, view obstruction, those type of things. It seemed that those landowners never had the option of -- to be located around wind towers.

But then when $I$ moved on to talking with buyers that purchased property, and I'm specifically talking about in Brookings County, surprisingly the story changed to when you talked about buyers who purchased acreages in Brookings County really there was -- the price that they paid was not affected by the presence of wind towers, which surprised me in a lot of the cases.

Does that answer your question?
COMMISSIONER HANSON: Yes. And Commissioner
Fiegen provided me with information showing that the A26 location, which is a potential location, is approximately one half-mile -- a smidgen less than a half-mile away from her residence.

THE WITNESS: Uh-huh.
COMMISSIONER HANSON: Do you have an opinion on how that might affect her property value?

THE WITNESS: I observed properties, physically walked the properties in Brookings County on a number of them. And I believe on some of those properties the towers ranged around that proximity of about 2,500 feet.

And the day that $I$ was there it was a windy day, and you could hear the towers on the property. So there was some kind of a noise invasion you would be able to pick up. It was pretty obvious. You're going to have the view obstruction. And then there is that --

I did hear a number of comments from participants about the flicker effect. But that seemed to be more of a narrow time of around an angle of the sun when $I$ heard comments about that, that there was that flicker effect around the property, in the yard, in the house if you didn't have window shades. But those are the kind of effects that $I$ would expect of a home that's within 2,000, 2,500 feet of a wind turbine.

COMMISSIONER HANSON: I appreciate that information. I'm going to ask the question in a slightly different way.

Do you believe that that would -- that a wind turbine approximately that close to a residence would have an adverse effect on the home's value?

THE WITNESS: With the six sales that I looked at in Brookings County with the rural residential
properties the sales evidence did not show any measurable effects on value.

COMMISSIONER HANSON: Thank you very much.
Appreciate that. Thank you.
MS. CREMER: Commissioner Nelson.
COMMISSIONER NELSON: Thank you. I don't have any questions, but $I$ want to say thank you for your Surrebuttal Testimony and the work that you did on that. It was very helpful to me.

Thank you.
THE WITNESS: You're welcome.
CHAIRWOMAN FIEGEN: No questions.
MS. CREMER: Did you have any redirect, Staff?
MS. EDWARDS: No redirect.
MS. CREMER: Dakota Range, do you have any
recross based on Commission questions?
MS. AGRIMONTI: No, thank you.
MS. CREMER: Ms. Mogen, did you have any questions?

MS. MOGEN: No.
MS. CREMER: Ms. Kaaz, do you have any?
MS. KAAZ: Unfortunately, not.
MS. CREMER: All right. With that -- yeah.
Because there were no questions, Staff, there's no final redirect.

You may step down. Thank you.
(The witness is excused.)
MS. CREMER: Staff, you can call your next
witness.
MS. REISS: Thank you. Staff calls Paige Olson, please.
Paige Olson,
called as a witness, being first duly sworn in the above cause, testified under oath as follows:

DIRECT EXAMINATION
BY MS. REISS:
Q. Thank you. Ms. Olson, would you please introduce yourself to the Commission.
A. Yes. My name is Paige Olson, and I'm the Review and Compliance Coordinator at the South Dakota State Historical Society.
Q. And how did you become involved in this docket?
A. I got a subpoena from the PUC.
Q. Thank you. And did you prepare testimony to be submitted in this docket?
A. I did.
Q. And is the document marked as Staff's Exhibit 3? I believe they're next to you if you'd like to check.
A. Yes.
Q. At the time your testimony and exhibits were filed
was it true and correct to the best of your information and knowledge?
A. Yes.
Q. And if I asked you the same questions today as those posed in your prefiled testimony, would your answers be the same?
A. Yes.
Q. Okay. Do you have any additions or deletions or edits to make to your testimony?
A. No.
Q. Have you had the opportunity to review the conditions proposed in Exhibit A18? That would be the conditions.
A. Yes.
Q. Okay. And do Conditions 11, 12, and 13 of that document address your concerns raised in your testimony? A. Yes.

MS. REISS: Staff has nothing further at this time.

I would offer Ms. Olson for cross-examination.
MS. CREMER: Thank you.
Dakota Range.

## CROSS-EXAMINATION

BY MS. SMITH:
Q. I guess I just want to confirm. Based on all those
conditions and your testimony, you're confirming that you have no further issues or no concerns regarding the work that's been done on cultural resources by Dakota Range? A. I do have some concerns, but I cannot address those. Those have to be addressed by the -- by the tribes.
Q. Okay. So and that helps me. Thank you.

As far as tribal concerns, you do understand that Dakota Range has engaged with and I'm going to use the acronym SWO and has engaged in tribal efforts to identify tribal resources?
A. Yes.
Q. And so my understanding of your recommendation was
that you had recommended that they do reach out to Native American Tribe and consult on tribal resources; correct?
A. Yes.
Q. And do you understand that that has been done?
A. Yes.
Q. So your particular recommendation has been satisfied; is that correct?
A. As far as $I$ know.
Q. All right. And just to confirm, the SHPO in this particular instance, given that this does not have a federal nexus, Section 106 does not apply to this project; is that correct?
A. It does not.
Q. And while there's a tribal component under Section 106, there is not a tribal component under the state statute on cultural resources; is that correct?
A. There is not.

MS. SMITH: I have no further questions. Thank you.

MS. CREMER: Ms. Kaaz, did you have any questions?

MS. KAAZ: No, I do not.
MS. CREMER: Thank you. Ms. Mogen.
MS. MOGEN: No questions.
MS. CREMER: Commissioner Nelson.
COMMISSIONER NELSON: Thank you for being here again.

In your Direct Testimony on page 5 .
THE WITNESS: Yes.
COMMISSIONER NELSON: Line 12 and 13 you said, "Dakota Range will need to provide the Commission with SWO's findings and recommendations if available."

I don't see that in any of the three recommended conditions. So help me understand. Is your statement still applicable and still something that needs to happen or not?

THE WITNESS: So I can't speak on behalf of the
tribes about their tribal resources. And in order to -for the Commission to fully understand adverse effects or any effects to these types of sites, you have to understand their significance.

And I don't -- I have not been -- I haven't been privileged to see the data that was -- that was gathered by SWO so --

COMMISSIONER NELSON: But what I'm understanding from your statement and your testimony is that you believe that the Commission needs to see that report in order for us to do our job; is that correct?

THE WITNESS: To understand the effects to those sites, that information really needs to come from the tribe.

COMMISSIONER NELSON: I don't mean this to sound flippant, but do we as a Commission need to understand those impacts if the conditions of a permit require the cultural resources to be taken into account throughout construction? Taken into account and protected.

THE WITNESS: Right. My understanding is that the condition is that they will be physically avoided. Cultural resources often have other components that make them significant, such as view shed.

COMMISSIONER NELSON: And so, again, do we need to understand all of that, as long as there is a
condition requiring that to be protected?
THE WITNESS: If you want to truly assess the adverse effects or the effects to the site, you need to understand that.

COMMISSIONER NELSON: Okay. Thank you.
COMMISSIONER HANSON: I didn't know who the teacher was going to call on is all.

Good afternoon.
THE WITNESS: Good afternoon.
COMMISSIONER HANSON: Pleasure to have you before us again.

THE WITNESS: Thank you.
COMMISSIONER HANSON: I'm sure just as big of pleasure for you as it is for us.

In your position with the State Historic Preservation Office it appears from the discussion that just took place with the Applicant and yourself that you have a working relationship with them. And apparently they are keeping you up to date as far as what has taken place; is that correct?

THE WITNESS: Yes. Except for the tribal surveys.

COMMISSIONER HANSON: But are they keeping you up to date as far as what they are doing in that arena?

THE WITNESS: Yes. That they have -- they are
using the Sisseton-Wahpeton Oyate Tribal Historic
Preservation Office to conduct surveys.
COMMISSIONER HANSON: Thank you.
It appears from what you're saying that they have been cooperative with you. Is that accurate, that they've --

THE WITNESS: Yes.
COMMISSIONER HANSON: -- worked cooperatively with you?

THE WITNESS: Yes.
COMMISSIONER HANSON: Okay. Do you have any concerns at this juncture, other than what you've told us?

THE WITNESS: No.
COMMISSIONER HANSON: Okay. Thank you.
Thank you.
MS. CREMER: Chair Fiegen.
CHAIRWOMAN FIEGEN: Thank you for coming back with us.

It appears to me when the Staff asked you questions your concerns are all addressed in Conditions No. 11, 12, and 13. And the questioning of Commissioner Nelson, that that needs to be done at the tribal level.

So I don't believe I have any questions for you today. Thank you.

COMMISSIONER NELSON: I have one, if I might. And I'm going back to the same issue, just so I understand.

I'm reading through the Proposed Condition 13.
"The Applicant shall file the final cultural resources report with the Commission prior to construction."

Do you know, would that cultural resources report contain the information from Sisseton-Wahpeton that you and $I$ have been discussing?

THE WITNESS: I don't know.
COMMISSIONER NELSON: Thank you.
MS. CREMER: Staff, did you have any redirect?
MS. REISS: No. Thank you.
MS. CREMER: And, Dakota Range, did you have any
redirect [sic] based on Commission questions?
MS. SMITH: No. Thank you.
MS. CREMER: Ms. Mogen, did you have any questions?

MS. MOGEN: No.
MS. CREMER: Ms. Kaaz?
MS. KAAZ: No, I don't.
MS. CREMER: Thank you, Paige. You may step down.
(The witness is excused.)
MS. CREMER: And, Staff, you can call your next witness.

MS. EDWARDS: Staff calls Jon Thurber.
Jon Thurber,
called as a witness, being first duly sworn in the above cause, testified under oath as follows:

DIRECT EXAMINATION
BY MS. EDWARDS:
Q. Please state your name for the record.
A. Jon Thurber.
Q. Did you file prefiled testimony in this docket?
A. Yes, I did.
Q. At this time do you have any corrections, deletions, or additions to make?
A. No, I do not.
Q. To your knowledge, were Staff and the Applicant able to agree upon any conditions?
A. Yes. We were able to agree to the conditions listed on Exhibit A18.
Q. Are there any conditions outside of Exhibit A18 which, in your opinion, would need to be added?
A. Yes. There's three remaining issues that aren't covered through that list of conditions. The first is environmental issues, and the parties both provided evidence on that issue.

The two remaining issues is material deviations.

That condition was included in Exhibit A18 but did not include a feet threshold. And then the third is decommissioning.
Q. Did you have a recommendation on the feet threshold you just mentioned?
A. Yes. Commission Staff was comfortable going with 325 feet like the Commission decided in the Crocker Docket. If the Commission decides to go with a different footage level, I would just encourage the Commission to think of the maximum footage threshold that it would be comfortable with so that this issue could maybe be resolved.

I don't believe it's really a case-by-case basis because there's a fair amount of judgment involved. So rather than continuing to bring that condition before the Commission, we would appreciate an order that kind of sets a maximum threshold the Commission would be comfortable with.
Q. Thank you.

You also mentioned the decommissioning process.
There have been questions asked regarding how Xcel Energy might be involved. Are you familiar with that line of questioning?
A. Yes, I am.
Q. To your knowledge, is Xcel a regulated public
utility?
A. Yes. They're regulated here in South Dakota.
Q. Do you have any experience with utility rates and rate regulation?
A. Yes, I do. I've processed a number of rate cases before.
Q. Do you have any such experience with respect to Xcel Energy?
A. Yes. I've processed two rate cases for Xcel Energy.
Q. Based upon your training and experience, and without binding Staff to any future position that might be taken in a rate proceeding, can you tell us how a regulated utility such as Xcel might pay for a decommissioning process?
A. Sure. The decommissioning costs are estimated as part of the depreciation study. And at the time of cost recovery or request for cost recovery of an asset the company also estimates the decommissioning cost, develops a depreciation rate, and requests that rate be reflected and adopted through the cost of service.

So at the point in time that a regulated utility requests recovery of a generation asset the Commission will have an opportunity to look at the decommissioning costs and the amount that would be appropriate in their rates.
Q. If an account were to be created to provide for decommissioning, would any surplus that remained in that account after decommissioning be passed on to ratepayers?
A. So if the Commission elects to kind of address decommissioning for a regulated utility through your general rates at the time that the asset's decommissioned, my understanding is any difference in what would be recovered would be rolled into the next depreciation rates.

So, in essence, it would be refunded or reflected into the rates of your ratepayers. So that access would be refunded back to ratepayers at that time.
Q. There was also a question posed about whether Xcel could get out from under any future obligation if incurred while selling that asset. Do you have an opinion on that?
A. I have an analyst opinion and would want to consult with my legal attorney as well. But my understanding of that statute would require a filing with the Commission, and at that time if there's a sale of the asset, the Commission would have the opportunity to address decommissioning with whoever purchased that asset from Xcel Energy.
Q. Thank you.

Turning your attention to Exhibit A21 filed today by
the Applicant, that is the proposed decommissioning proceeding -- or proposed decommissioning conditions.

Were you involved with the drafting of this
condition?
A. No, I was not. There's been some discussion between Staff and the Applicant, but there's been -- Staff did not have any involvement in drafting this condition.

MS. EDWARDS: I would tender this witness for cross.

MS. CREMER: Thank you.
Dakota Range.

## CROSS-EXAMINATION

BY MS. SMITH:
Q. Good afternoon, Mr. Thurber.
A. Good afternoon.
Q. Regarding the 325 feet -- and I believe you were present when Ms. Gunderson indicated that Dakota Range would agree to 325 feet going forward if the one shift that's between 325 feet and 500 were approved as part of this docket -- does Staff have any objection to approval of that particular shift within this docket?
A. I don't believe we've had an opportunity to review, you know, all the compliance features outside of that with noise and shadow flicker. But as long as we've met those requirements with noise, shadow flickers, and the
other applicable requirements, Staff has no objection to that approach.
Q. Okay. And regarding the decommissioning condition, I just want to make sure that we understand where Staff is at.

Are there any -- with the language that's been proposed are there suggested revisions, or is what is proposed with the addition, if needed -- it sounds like maybe it's not needed, of a provision that if the project were sold by Xcel, perhaps a default or a reexamination of decommission funding would be required or added.

Is Staff supportive of this condition as written with that addition?
A. So we -- through testimony and through discovery it's been unclear that Xcel Energy is fully responsible for the decommissioning costs.

I would like to refer to Staff Exhibit S1, and I will find that discovery request.

So I'm referring to Staff Exhibit S1, Exhibit JT-1, page 13 of 156.

MS. CREMER: Okay. Was somebody asking me a question? We were having a discussion.

Okay. Thank you.
A. So I'm referring to the response to 2-1. Our question was, "Referring to Section 6.0 of the

Application, please explain why Xcel Energy is not listed as the proposed rights for ownership of the project."

And $I$ guess the response that $I$ would like to refer to is at the very bottom of the response it says, "Second, even after the sale is finalized, the project will still be owned by Dakota Range I, LLC and Dakota Range II, LLC."

So if Staff can get comfortable with the actual ownership structure -- and from some of the discussion with Mr. Mauersberger yesterday it kind of went back and forth whether Xcel was going to be owner and fully responsible or if it would be Dakota Range, LLC.

Without knowing that and getting a very direct, specific answer that Xcel Energy is going to be responsible and fully responsible for the decommissioning, at that point in time if we get that answer, then $I$ believe that decommissioning becomes less of a concern because it can be addressed through our general rates and through our normal rate process.

So if you're looking at proposed decommissioning condition, it indicates that, "Decommissioning financial security will be analyzed in year 10 of operation."

And $I$ have some concerns with that. You know, I believe that decommissioning should be analyzed at the point in time where cost recovery of the asset is
requested so that, you know, the folks that are receiving the benefit through rates of the asset should also be paying for the decommissioning of the assets, follows cost causation principles.

So what Staff would -- I think I answered your question. So --
Q. I think you did.

And if $I$ can refer you to A21, which is that decommissioning provision, and if you look at the second line, maybe -- I'll just read the first couple of lines. So it says, "If the Applicant is purchased by Northern States Power Company, d/b/a Xcel Energy, and at least 90 days prior to commencing project operations Northern States power Company, d/b/a Xcel Energy, files documentation indicating it will be financially responsible for decommissioning costs, then decommissioning financial security will be analyzed in year 10 of operation."

Does that second clause of that particular sentence address your concern regarding having documentation of Xcel's financial responsibility for decommissioning?
A. Well, I'm -- I would like to know during the hearing whether they have financial responsibility or not.
Q. But wouldn't this condition make it so?

And if they didn't make that filing, it goes on to
say that the -- you know, then you have to come back to the Commission before operations and address decommissioning funding.

Does that last clause address your concern?
A. Can you please point me again to the specific clause you're referring to?
Q. Sure. So we have the -- the first sentence has the requirement of the documentation filing. Do you see that?
A. Yes.
Q. And then if you look down in -- where it starts -- the third sentence. So it would be, "In the event.
"In the event that Northern States Power Company, d/b/a Xcel Energy, does not purchase the project or does not file documentation with respect to decommissioning costs in accordance with this condition, the Applicant will file an updated decommissioning plan and cost estimate at least 60 days prior to commencing project operations and the Commission will determine the form, amount, and timing of financial security to be provided by the Applicant."

Does that default, if there is not that financial commitment made by Xcel, address your concern?
A. I guess that's a question of whether the Commission
should allow construction to begin prior to having that financial security at decommissioning known at the time.

So I guess I would prefer to have the financial security known prior to the -- you know, the start of construction.

MS. SMITH: Just one second, please.
(Pause.)
MS. AGRIMONTI: One moment, please.
(Pause.)
MS. SMITH: I have no further questions at this time.

MS. CREMER: Ms. Kaaz, did you have any questions?

MS. KAAZ: Yes, I do.

## CROSS-EXAMINATION

BY MS. KAAZ:
Q. On your Staff Data Request you -- on page 114 you asked Mark Mauersberger -- I think I said that right -about the ADA lighting system. Is the -- is the Commission or Staff, are they going to request that they use the ADA -- sorry. ADLS lighting systems on these towers?
A. Can $I$ ask for the page number again? I'm sorry.
Q. It's page 1, I believe. And I saw it on the Staff Data Request and then 1-4. I just was reading through,
and it just was a question that he answered.
A. I can't seem to find it based on your reference.
Q. Is it included in the recommended permit conditions?
A. No, it is not.
Q. Okay. Are you satisfied with his answer to why they were not going to use that lighting system in the Dakota Range project?
A. I believe that Dakota Range's current lighting system based on their response does satisfy the federal requirements for such a lighting system. I think an ADLS system would be beneficial for the public, but I don't believe that there's a requirement to do so.

MS. KAAZ: I'm not sure how I should proceed with this in asking that you make it a requirement as to not only the -- and $I$ don't want to testify. I think I --

MS. CREMER: And I would just say when you do offer your testimony you could offer that as a condition.

MS. KAAZ: Okay. That was all. I just wanted to make sure it didn't get forgot -- or missed. So I apologize, but $I$ think I'm done.

THE WITNESS: You're fine.
MS. CREMER: Ms. Mogen, did you have any
questions?
MS. MOGEN: No. No questions.

MS. CREMER: Thank you.
Commission questions. Commission -- or Chair Fiegen.

CHAIRWOMAN FIEGEN: Just a question on the proposed decommissioning condition on A21. Was it my understanding you just got this this morning when we received this?

THE WITNESS: The company shared it with us yesterday.

CHAIRWOMAN FIEGEN: Okay. Did you guys have time to review it as a Staff and analyze it and talk to your analysts that do rate cases, et cetera, to ensure that your edits to this -- I mean, right now -- we're kind of making you edit it on the fly, and $I$ just want to make sure that we give -- because this is new to us as a Commission anyway.

THE WITNESS: Right. It was provided yesterday, and we have not had an opportunity to propose any edits and sit down as a group and really go through the proposal.

CHAIRWOMAN FIEGEN: Do you work with your other analysts that work on rate cases when you would look at this type of condition and --

THE WITNESS: Yes.
CHAIRWOMAN FIEGEN: And were they available
today?
THE WITNESS: No. I have not had an opportunity to discuss this proposal with them.

CHAIRWOMAN FIEGEN: Were they out of the office today possibly?

THE WITNESS: I don't know where they are.
MS. AGRIMONTI: I believe he's out of the office today.

CHAIRWOMAN FIEGEN: You're out of the office. You're on fourth floor.

Thank you. That's really, I believe, all my questions at this point.

MS. CREMER: Thank you.
Commissioner Hanson, did you have any questions?
COMMISSIONER HANSON: Mr. Thurber, I don't have any questions for you. I just want you to know I appreciate your testimony, your written testimony and information. I went through it thoroughly, and I have -as my Commissioners, fellow Commissioners, would attest, I have lots of sticky notes and information on it, and $I$ used that as a good reference guide for concerns in relationship to the other work that $I$ did in looking at the other testimony throughout.

So thank you very much for that.
THE WITNESS: You're welcome.

COMMISSIONER NELSON: Mr. Thurber, one question. When you were asked if there were any additional conditions that Staff would recommend, you mentioned there were three. The first being environmental. Can you flesh that out?

What do you mean by that?
THE WITNESS: I think at this point in time there's still concerns from our witness that we subpoenaed from Game, Fish \& Parks, Mr. Kirschenmann, regarding mitigation on grasslands. So we will be discussing with him after the end of the evidentiary proceeding and briefing and -- that issue.

COMMISSIONER NELSON: And so can I anticipate that you'll be putting that in writing in your posthearing brief?

THE WITNESS: Correct.
COMMISSIONER NELSON: Thank you.
MS. CREMER: Mr. Rislov.
MR. RISLOV: I can't pass up this opportunity.
I have a couple.
CHAIRWOMAN FIEGEN: Be careful.
MR. RISLOV: You yourself are the most experienced rate case analyst among the Staff right now, aren't you?

THE WITNESS: Ms. Mehlhaff and I have haven't
counted rate cases together, but it might be a close call but --

MR. RISLOV: So going to decommissioning, do you believe that language can be drafted that would satisfy both Commission's jurisdiction and the interest of the company to $I$ think properly comfort that burden, how it should be assigned based on ownership?

THE WITNESS: Correct. If I had a preference between, you know, the method proposed in Crocker versus the method proposed here because we have regulation over that utility, I think it would be better addressed through general rates than through a condition of a permit.

MR. RISLOV: But you don't see this as a difficult redrafting problem, do you?

THE WITNESS: I do not. I see slight differences between and in, you know, counsel with legal to make sure that some of the outs that we were talking about if Xcel sells and perhaps getting some type of documentation in the record clarifying whether Xcel has full financial responsibility sooner rather than later would certainly assist Staff in forming a position.

MR. RISLOV: I'm going to go back to the second suggestion that you have regarding a change or an addition to conditions. And that related to, to date
what we heard about, some shifts that the company is proposing.

Now in the past I've known that the Commission's drafted orders where there's been a change they requested the company come in and get that approved. The company is suggesting it now rather than later after the hearing is over.

Has Staff had a chance to look at those proposed shifts to see if they would comply -- I shouldn't say comply but that the Commission should be in a position to approve those posthearing, this hearing, rather than treating them as a separate matter down the road?

THE WITNESS: We haven't had a lot of time to consider it. We haven't had a time to really look through the one or two changes that exceed the 325 feet threshold that we're comfortable with.

Because of the distance between time when -- if the Commission does grant this permit and when it would actually be constructed or when the construction would start, one option would be to require them to make a material deviation filing for the changes over 325 feet.

And $I$ do think there's adequate time if the Commission feels as though they haven't had a record put before them that they're comfortable approving these one or two changes -- or shifts that exceed 325 feet.

MR. RISLOV: Yeah. I assume it's a legal matter the attorney's going to have to discuss, but I was just curious if that's something both company and Staff -- I'm sure the company can answer that question for themselves, would intend to have us review now rather than as a separate matter down the road in order to agree to the 325-foot shift proposed as, let's say, a condition of making those changes.

THE WITNESS: Yeah. I do believe the offer that the company put forward included, you know, approval as part of this proceeding, this change. I just wanted to make the Commission aware that we have not had an opportunity to look in detail at those shifts yet.

But if the evidence is in the record and we can discuss that with the Applicant, perhaps we can brief it to let you know if, you know, we've looked at the one or two changes and we don't see any concerns with them.

MR. RISLOV: Thank you.
COMMISSIONER NELSON: This might be more of a statement than a question, but $I$ will say at least as this Commissioner, $I$ found the Applicant's offer in this regard to be very reasonable but would certainly like Staff to brief your observations of those shifts in your brief.

Thank you.

MS. CREMER: Mr. Thurber, and possibly you've addressed this, but you're familiar with the Crocker escrow account for decommissioning; correct?

That was what was ordered in the Crocker; correct?

THE WITNESS: Yes. I'm somewhat familiar with it.

MS. CREMER: So my question is would Xcel's ownership of this project impact -- if the Commission were to still set this up as an escrow because Dakota Range currently owns the project, does that somehow impact what would happen if Xcel ultimately buys it? Would you have any --

I mean, do you have any idea?
THE WITNESS: I think your escrow option is -it's also something that the Commission could do if it preferred. I guess decommissioning, in my opinion, is looking at concerns of THE financial viability of the entity that owns it. And the financial viability of a regulated utility which the Commission sets rate for is certainly different.

If A regulated utility owns the asset compared to if a developer which we don't have rate authority -so the level of concern is a little different, having different depreciation methods for this asset compared
to -- or excuse me. Different decommissioning methods for this asset compared to other assets owned by -- by Xcel Energy, $I$ don't know if we need to do that.

If you're interested in thoughts on how that escrow option -- how Staff would recommend tweaking or modifying that escrow option for this case, $I$ can certainly provide those for you if you're interested.

MS. CREMER: Yes. That would be preferred.
Thank you.
THE WITNESS: So based on the -- I believe it was 40 -- I'd have to look at the DVGNL [sic] study. I think it was $\$ 44,000$ in 2017, real dollars. I forget exactly which exhibit that was.

So assuming $\$ 44,000$, if the Commission wanted to continue to do $\$ 5,000$ per year per turbine, I guess I would recommend bringing the company back in, say, in year five instead of year 10. Say you come back in under the amount stated in the record as an opportunity to reevaluate the decommissioning amounts. Because at year 10 you would exceed what they're recommending. I don't know where that would be at escalated for inflation, but I guess I would recommend modifying that proposal as such.

Also I'm not as familiar with all the other conditions that were put on the escrow account. I do
know that bankruptcy law is a complicated matter, and $I$ think our attorneys would want to do a deep dive into some of those conditions.

MS. CREMER: Thank you.
Does the Commission or anybody have anymore questions?

Staff, do you have any redirect?
MS. EDWARDS: I do not.
MS. CREMER: Dakota Range, do you have any
recross based on Commission questions?
RECROSS-EXAMINATION
BY MS. SMITH:
Q. I just have one question. Regarding the escrow account, is it your understanding that the cost -carrying cost of an escrow account would be higher than, for instance, a surety bond or a letter of credit?
A. I do believe that the Applicant provided some information that $S t a f f$ requested on the different financial options, but off the top of my head I don't recall what that information was that the Applicant provided.
Q. Okay. If the carrying costs were higher on an escrow account, for instance, wouldn't it be preferable for ratepayers if there were a form of security that provides the decommissioning, you know, assurances but
also minimizes the cost to a regulated utility such as Xcel?
A. Yes. If it carries the same level of insure -assurance. I think we would want the cheapest option with the same level of coverage.

MS. SMITH: Okay. I have no further questions.
MS. CREMER: Ms. Mogen.
MS. MOGEN: No questions.
MS. CREMER: Ms. Kaaz. Ms. Kaaz.
MS. KAAZ: No questions.
MS. CREMER: All right. Thank you.
MS. EDWARDS: Nothing further.
MS. CREMER: All right. You may step down,
Mr. Thurber.
(The witness is excused.)

MS. CREMER: I do have a question for Staff. Do you have another witness or --

MS. EDWARDS: I stand willing and able to call
Patrick Steffensen and Eric Paulson, if you like. I do know they are in the office and listening. However, Mr. Thurber is our last witness at this time.

MS. CREMER: All right. Thank you.
Before we take a break, I just want to make sure that Exhibit A19, which is the wind energy lease and A20, which is the good neighbor document, were offered.

MS. SMITH: I thought that the one -- the lease was. I'm not sure that the good neighbor agreement was. For the sake of completeness, I'll just ask that each be admitted into the record.

MS. CREMER: Thank you.
And, Staff, do you have any objection?
MS. EDWARDS: No objection.
MS. CREMER: Ms. Mogen, do you have any objection?

MS. MOGEN: No objection.
MS. CREMER: Ms. Kaaz?
MS. KAAZ: No objection.
MS. CREMER: And hearing no objection, Exhibit A19 and A20 are admitted into the record.

It's probably time for a break. We'll be back at $3: 30$ unless there's anything else we need to take care of before that.

When we come back from the break it will be the Intervenors' turn to present their case. You guys can decide which one of you want to go first, and we'll reconvene at 3:30.
(A short recess is taken.)

MS. CREMER: I'll call the hearing back to order. And if $I$ recall correctly, Staff had concluded their case, and we are prepared to take Intervenor
testimony. Which of you would like to go first?
MS. KAAZ: I'll go first. Ask questions; right?
MS. CREMER: To testify. To put in your case.
MS. KAAZ: I will go first.
MS. CREMER: All right. If you want, you can just go sit in the witness chair. And take your -- if you have your prefiled testimony, you can take that up there with you.

MS. KAAZ: Is it okay if I just call a witness?
MS. CREMER: I don't recall that you had anybody -- or that there was any prefiled testimony by another witness.

MS. KAAZ: I did have a couple persons I was going to ask questions to. And $I$ was going to have Dan enter his comments, but he was brought up in testimony today so he came so he could answer those questions.

MS. CREMER: Let's do this. I think you need to take the witness stand in order to get your testimony in. So we'll have to start with that. And we'll start there and then see how things roll out. How about that?

MS. KAAZ: Okay. That's fine.
MS. CREMER: So you can just take the chair there, and the court reporter will swear you in.

MS. MOGEN: Can I ask, is it possible that I ask Teresa questions?

MS. CREMER: And either that or $I$ can kind of direct her a little. We just really -- what you need to do is just kind of state your name, where you live, your concern here and just --

MS. MOGEN: May I go first then?
MS. CREMER: Yes, you may.
Kristi Mogen,
called as a witness, being first duly sworn in the above cause, testified under oath as follows:

MS. CREMER: Did you want me to direct a few generic questions your way, or are you prepared to just go forward.

THE WITNESS: The generic questions, asking if I have corrections, that would be good.

MS. CREMER: You can just kind of tell us that. You can summarize -- tell us your name, and why don't you give us your address, maybe how far you are from the project. And then summarize your testimony, your prefiled testimony.

THE WITNESS: Okay. My name is Kristi Mogen. I live in Twin Brooks, South Dakota. And I think I read that $I$ was about 8 miles -- 8, 9 miles to the closest turbine. Okay.

I do have testimony. In paragraph 5 it should read, "Included in the Application is the decommissioning
report that understates the cost of decommissioning. The wind industry representative Tyler Wilheim at the March 12, 2018, (recording can be provided), Codington County Planning and Zoning Meeting stated decommissioning is 170,000 per turbine."

That was in response to a question in somebody's Rebuttal Testimony.

Why I'm here today. I'm a farmer. I also have a home-based business so I'm at home a lot. But I farm, and the land is so important.

We were in Wyoming for quite a while farming, and an energy company who was fracking moved in two miles from our home. We thought nothing of it. We heard stories about it. We thought nothing of it. Within a month we had to evacuate our home. We had to go back.

So after several neighbors died of cancer, my daughter got a tumor, my husband was very sick, we abandoned our home, and we moved to South Dakota. I grew up here. I thought $I$ was coming home to a wonderful, safe agricultural environment. I called the County before I moved there. They said agriculture is number one. I said no mineral supremacy? They said agriculture is number one. I said that's where we need to be.

We do no tilling. We are working to restore native grasses. We do soil carbon farming, which is
taking the carbon from the air and putting that back into the soil by proper management of our grasses. So the grasslands are very important to us, and that is what sustains our farm. And it is being profitable on a smaller scale, producing breeding -- breeding stock and, because we do grass fed, we take our calves all the way to finish.

We do pollinators. We have people come to our property and harvest dung beetles.

I should be the poster child for wind turbines. I've lived through fossil fuel nightmare. And I just can't believe that I'm going back through impacts and somebody using my land by trespassing either with noise, flicker, chemical. I bought that land. I pay taxes on it, and $I$ have a right to decide what is done on it.

I protect my waters. My cattle are not allowed in them. I have riparian areas for my birds. The ecology is important to me.

When $I$ started this $I$ didn't understand about the turbines. You know, I drive by. They don't even bother me. I'm just like they're 6 miles away. I kind of thought they were pretty up there. Kind of seemed like pinwheels in the sky to me.

And I started hearing -- I was at a cracker barrel, and my representative wasn't protecting public
health and safety. And $I$ kind of got on him.
After that meeting a couple of people came over from Clear Lake, and they said, hey, well, you know something about this stuff. I said, well, I've lived it. They said, let me tell you some stories. I went out and verified those stories, and I'm like these people are saying the same things that $I$ said in the fracking field with the impacts and they're abandoning their homes. Vickie May, David James, Ted Harke [phonetic]. I've talked to them. I've personally talked to them, and their story was the same as mine.

So then I started investigating. One of the things that really got me going, I saw an aerial picture of a turbine farm -- project. And that gave me -- one of my friends said that's your PTSD moment. It looked like a fracking field.

And then my aha moment went on with there was this huge report that came out about fracking and carbon footprint. Because everybody was running around saying fracking's cleaner than coal, and it was disproven, when they started taking the cradle to grave footprint and all the information.

So I started researching it, and then $I$ found out about the flicker. And the flicker may or may not cause my daughter to have a seizure. I don't know that
yet. I know a lot of things do cause her to have problems, vertigo issues.

I do know that her driving through flicker is different than a stationary greenhouse study. My daughter wants to take over that land, and it is her chance to never be on disability. We have not raised our kids even if they have a disability to live off the system. And she will have a lower income than most because of her medical conditions.

That farm is her protection. She will not be able to get the college degree that our younger daughter will get, and it's already been agreed upon that Katie would get the farm. If she has to drive through these turbines to go to work every day or adjust for shadow flicker and an employer can't do that, she will not be working, and she will become a burden on society. And she doesn't want that either. And she shouldn't have to live a lifestyle she does not want to.

Our home is very quiet in the evening. We go sit out and do bonfires once in awhile when there's a special celebration because of an achievement that those kids have done. We sit and listen to -- or watch the June bugs and listen to the birds. It's just the most beautiful place.

I didn't think we were going to find another
home that we would like as much as in Wyoming. It was very hard abandoning that place. It didn't sell for over two years after we left, and we took a big hit.

We also took a hit on our income. My kids in high school had to start over with friendships. There's socioeconomical issues with this. All my friends out there, they didn't stay in Wyoming. They were master gardeners who volunteered many hours in their community. They moved out of state.

My friends in Clear Lake who I have met through this issue, they're not staying in the area. There's a few staying in South Dakota, but many are looking out of state or have already purchased out of state.

They're not staying in the community, supporting the schools and the hospitals and the tax base. They're leaving. That is if they can sell their home. Two of them have already move --

MS. SMITH: I'm going to object to speaking on behalf of other people. I believe it's definitely appropriate to speak to own experiences, but when we start speaking for third parties it would be hearsay.

MS. CREMER: And I will acknowledge that would be an appropriate objection. However, we are an administrative agency, and the Commission will give it the weight it deserves.

MS. SMITH: Certainly.
THE WITNESS: I think -- in Wyoming I would sit on my deck, and I saw a wind project about 50 miles away. Those lights at night flickering were really annoying. And when you're annoyed you are stressed, and stress does cause health issues.

I don't know how many issues were -- I know my husband had to deal with PTSD because of the stress in living in the fracking field. I have no idea how he is going to handle these. And $I$ will have one about three-fourths of a mile from my property in the next project.

Falk Farms is sponsoring one not far from my place. That's a little over a mile.

We did not know things in Wyoming until we went through it, and $I$ do not think that -- you know, wade and I should be best friends. We're both farmers, and we both need to do things to build up agriculture in South Dakota. And when he said that he trusts them -because you know what? That's the South Dakota way. And that's why we love it here. Because the people trust each other.

That company, Dakota Range, did not tell him and does not advertise the impacts that are going to happen and the changes in our community that are already
happening because those are coming in. And $I$ feel bad because he didn't know and he doesn't know and he won't know until it gets here. And I've been there.

CHAIRWOMAN FIEGEN: Take your time.
THE WITNESS: So that's why I'm fighting so hard. If they were honest, if they knocked on everybody's door -- I bought my property in 2015. I would have never bought that property if there was a turbine within two miles. And that was when $I$ wasn't knowledgeable about what the impacts are to the land, to the ecology.

I wouldn't buy property within one mile of a transmission line. My daughter has epilepsy. She can't deal with electromagnet fields. Our house is very low, very quiet. We did have an original property here in South Dakota over by Revillo. And a transmission line was going in and we sold it immediately because her health and it was important that she gets to stay farming and on the land.

I don't believe -- I believe Falk Farms and everybody else should have their property rights. I really do. But $I$ have mine, and nobody knocked on my door and said, hey, is flicker or excessive noise at night okay? Would you put up with this?

They knew in 2016 the turbines were coming in.

I did not even know until 2017. And at that point $I$ didn't get on the bandwagon because, like I said, I should have been the poster child. If it weren't for people telling their stories, I wouldn't be here today. And I do believe them because I've lived it.

They should not be allowed to have blinking lights. They should not be allowed to use somebody's property without their permission.

I do believe I'm not the only one that's looked at those maps. My friends are not on it. We did some Google Earthing. There were some homes, but we didn't go knock on doors. I have two friends that are not on that map being identified. I do believe -- and I'm sorry I did not bring a proper map to demonstrate, but $I$ do not believe the receptor is on top of Teresa Kaaz's house. And $I$ would ask that you -- the Commission ask for a new sound and flicker study correcting the missing receptors and verifying with a map that is readable and not little -- that's not even an 8 by 10 . So you can evaluate it.

MS. CREMER: So I'm going to presume unless you tell me otherwise that you're done with a summary of your testimony. Did you have -- so that appeared to me to be a condition that you'd like us to look at.

Did you have any other conditions that you would
like us to consider?
THE WITNESS: I will not ask you to deny this even though $I$ feel it's the wrong thing for my community. I do not see it helping taxes. I do not see a job problem in our community.

But I will ask you to respect private property rights and to allow the people who could host a turbine with themselves or agreeable participating neighbors to have them. What we are calling a two-mile setback with a waiver.

If they would have come to knock on my door, I could have evaluated if this would have been safe for my family. I do not believe it is. I have been looking at this for months. And it is peer reviewed reports. I know better. I've been through this.

But nobody knocked on my door, and there will be flicker on my property. So I am asking that the Commission really consider a two-mile setback with a waiver to protect public health and safety and protect property rights of South Dakota farmers.

MS. CREMER: Thank you.
Was that everything then?
THE WITNESS: I believe so.
MS. CREMER: And we'll turn to Dakota Range for cross-examination.

MS. SMITH: I don't have any cross-examination. Thank you.

MS. CREMER: Thank you. Staff.

## CROSS-EXAMINATION

BY MS. EDWARDS:
Q. Thank you, Ms. Mogen. And maybe you already answered this and if you have, I apologize but how far is the nearest turbine from your property line?
A. I do not know that answer.
Q. Okay. Would the aircraft detection lighting system alleviate any of the concerns you just spoke about?
A. It would take away an evening annoyance of when we're outside, which we spend a lot of timeout side. It's beautiful.

MS. EDWARDS: Thank you. No further questions.
MS. CREMER: Ms. Kaaz, did you have any
questions?
MS. KAAZ: I'm just glancing really quick. CROSS-EXAMINATION

BY MS. KAAZ:
Q. Ms. Mogen, did you go to the Dakota Range CUP hearing in Grant County in June of 2017?
A. No. I wasn't aware of the turbines. I wasn't aware of the project. Or the impacts.
Q. Okay. Did Grant County send out certified letter stating that they were going to grant a Conditional Use Permit?

So did they provide notice for its residents or only the ones -- any residents that you know of?
A. I have never received notice by mail of a project, and actually until just recently there weren't even ads in the paper about it. Not -- they're doing half a page on the inside and the whole back page. Well, if they would have done that two years ago, we probably wouldn't be here.
Q. And $I$ apologize if $I$ word this wrong, but it's kind of covering how I semi feel but you semi feel.

Have you felt singled out as we have gone through this process through our Commissioners, our -- any public entities that we have gone through, has Apex -- has it felt to you that Apex has treated you unfairly?
A. I have no interaction with Apex, and I don't feel singled out. In fact, my friend base has grown because of the amount of people who are against the projects.

MS. KAAZ: I have no more questions.
MS. CREMER: Thank you.
That would take us to Commissioner questions.
And, Commissioner Hanson, it's your turn to go first. COMMISSIONER HANSON: Thank you.

Good afternoon.
THE WITNESS: Afternoon.
COMMISSIONER HANSON: You learned a lot of the process as we go through during this event?

THE WITNESS: Yes. Yes. This is a very formal one compared to the other boards in the state.

COMMISSIONER HANSON: Well, that's our -- that's our challenge. And yours as well.

I was wondering -- I might need help from the Applicant here -- as I'm looking at your address, 471 First Avenue in Twin Brooks and looking at maps I've been trying to figure out just exactly where your property is located. And perhaps the Applicant could find which one of the maps would be --

THE WITNESS: I don't think I'm actually on one of these maps.

COMMISSIONER HANSON: That would be why I can't find you.

THE WITNESS: There you go. Yes. Yes. But I am actually closer than either one of the people that they called.

COMMISSIONER HANSON: In what direction then?
THE WITNESS: East. If I had a map, I could tell you which -- I think I did know which turbine east I would be of.

COMMISSIONER HANSON: You're east of -- I'm looking at A15-4, and $I$ believe that's what that one is. That is leaning against the --

CHAIRWOMAN FIEGEN: Do you see that really big map there? That's the one that --

COMMISSIONER HANSON: Could someone pick that up for her?

You'll need to use the mic. and sit down while you're doing it. We'll give him a tip for holding that.

THE WITNESS: Actually so this is 458 th , and so I'm right here straight east. So it must be turbine 44 that we would be the closest to (indicating).

COMMISSIONER HANSON: And you say you're a mile from that one?

THE WITNESS: No. No. In the next project I'm a mile from -- Wade Falk is hosting one a mile from my place, but that's in the next project that will be in front of the PUC in our area. It's Cattle Ridge.

COMMISSIONER HANSON: All right. Thank you much.

So this project is not affecting your property.
THE WITNESS: It affects my family because we drive through here. We recreate here. Our friends -this is my friends. I go to their homes every week. We sit outside at a pond or we sit outside and hang out and
help each other farm or do projects. And my daughter drives through this every day to go to school. She will be.

COMMISSIONER HANSON: Okay. Now I fully appreciate and understand the way you were testifying and everything. Okay. Thank you.

I don't have any further questions then. Thank you.

MS. CREMER: Commissioner Nelson.
COMMISSIONER NELSON: Thank you.
And Commissioner Hanson really went down the same track I was going down. I understand that your residence is 8 or 9 miles east of the nearest turbine. And just so I'm clear, this project will not have any impact on your property; correct?

THE WITNESS: Correct.
COMMISSIONER NELSON: Thank you.
CHAIRWOMAN FIEGEN: Thank you. I get to call you Kristi. You know, thanks for coming. You know, it's really -- it takes effort to be in front of the Public Utilities Commission because it's judicial, and judicial is not always easy for our citizens of our state because they're used to going to their township board or their county board or their school board or their legislature where they can just visit and you can make decisions.

As you can see, ours is completely different, and $I$ don't know if you knew that before, Kristi. Were you aware of how the Public Utilities Commission works and the judicial process and the four things that we need to look at?

Were you aware of that before you started getting involved?

THE WITNESS: Yes. And the concern that I have is public health and safety, which $I$ was more knowledgeable to talk on the environmental because it's important to me. But knowing those four things, the public health, safety is the most important to me, and that is in your purview; is that correct?

CHAIRWOMAN FIEGEN: Right. It absolutely is.
THE WITNESS: Yes.
CHAIRWOMAN FIEGEN: Of course, as the Public Utilities Commission we have to look at facts and evidence and peer reviews and scientifics and have those -- as you know, if somebody presents something, that we need the scientist here that we can respond back and forth. So it becomes very tricky, and I certainly appreciate you coming forward and giving us all the information.

I have a question on your Wyoming setting. You talked about being in Wyoming and seeing the lights from

50 miles away. How about where you're at right now and where you live?

And $I$ don't know your elevation or anything like that. So can you see lights where you're at now of any turbines within 50 miles of your home?

THE WITNESS: I do not know of any within
50 miles of my home. There may be and then $I$ don't see them. I do not know of -- I don't see them. No. Not now. Not at this property.

CHAIRWOMAN FIEGEN: Okay. I just know my drive on 29 so I'm not going to talk about that because then all the sudden I'm giving testimony and then Commissioner Hanson will put me on the stand and I'll have to take the oath of office -- the oath of office? The oath --

THE WITNESS: For Wyoming $I$ do think that it had to do with $I$ was on top of the hill and they were on top of the hill and there was pretty much valley all the way across. We actually couldn't see the turbine. We could see the lights at night.

CHAIRWOMAN FIEGEN: Okay. Thank you.
So I think actually everything has been -otherwise, I had some questions, but I think Commissioner Hanson and Commissioner Nelson have absolutely asked those questions of you so those have been answered. But thank you so much for coming and participating.

MS. CREMER: Well, $I$ believe you can step down unless there's something you feel you need to comment on based on any questions that were asked of you.

THE WITNESS: The blinking lights. I'm trying to remember that. I lived in Douglas, Wyoming, and they were past -- they were close to Casper. So that's where I'm going on reference.

I didn't -- I didn't measure it out. I want you to know that but that's -- we usually kind of -- that was what we figured was about the 50 to -- 40 to 50 , I guess.

CHAIRWOMAN FIEGEN: You're going to be surprised, but $I$ used to go down there for about six years for a state track meet so those are areas I've been in before. But thank you. But not probably at night.

MS. CREMER: All right. I think you may step down then. Thank you so much.
(The witness is excused.)
MS. CREMER: Ms. Kaaz, do you want to follow that?

MS. KAAZ: Yes.
Teresa Kaaz,
called as a witness, being first duly sworn in the above cause, testified under oath as follows:

MS. CREMER: So we'll kind of do it the same way. You just need to tell us your name. You can give
us your address. I think we all know by looking at the maps kind of where your land is, but feel free to describe that again and just your concerns.

THE WITNESS: My name is Teresa Kaaz, and I live at 15610 459th Avenue in South Shore. I guess I would talk about my home, but $I$ can't because I'm going to get emotional so $I$ don't want that to happen.

CHAIRWOMAN FIEGEN: Take your time.
THE WITNESS: I'll just say a few things as to why I am here.

MS. CREMER: Let me do this. When did you move to your current location?

THE WITNESS: We bought our home in 2001.
MS. CREMER: And have you done some remodeling on it?

THE WITNESS: Yes. When we bought it we first moved off our trailer house from our property that was closer to Watertown and then my husband moved on his grandfather's shop so he could have a shop and then we built on a garage.

We stayed there for years. And due to financing issues and wanting to grow our property, because we only had a trailer house, $I$ said we need to build a home.

So we worked on finding financing to try to build a new home, and it didn't work out at the time. So

I found a home to move on from Waverly. We purchased it for $\$ 10$. It's a Montgomery Ward house. Three stories. We moved it over to our home. We left it on blocks, and we waited for our financing, which was heart wrenching because my husband did not know I was purchasing a house until I already had it. Try to explain that was -- he was scared. I was positive it was all going to be fine.

But anyway we got our financing a little over a year after we had it. And then $I$ started working on it the second it got on the basement. And we completely gutted it, remodeled it, put in new windows, free form insulation, steel roof. And $I$ think it was about the spring of 2017, right around April or May, we finished connecting the big house to our garage and we were just finishing up the -- an old foyer into a garage stall so we could have three garage stalls --
(Discussion off the record.)
THE WITNESS: We had two, but we added a stall. I apologize. I'm sorry.

Anyway from there Dan was home for a week from work and we were busy working and our favorite mailman blew in the yard with a certified letter. That was in the middle of the week. Said there was a meeting on Monday. Showed a map of towers, which at that time there was between seven towers, I believe, all the way around my property.

So he went back to work on Sunday, and $I$ went to the first Codington County meeting on Monday night, and that's when they passed the Conditional Use Permit. So I was already behind the ball.

When my sister came with me that night just because $I$ didn't know what was happening and I asked her just to come with me because I don't like to go to those things alone just because you never know what's happening. Anyway, I did speak that night even though she pinched me really hard in the arm because $I$ told her if $I$ started to move, to please pinch me.

But I just got up and I -- I pretty much spoke to Luke Mueller who was -- very acquainted with him due to our building process we had just been through for the last few years. And $I$ said did you -- you know I live on a valley. I can see all the way to the Big Stone Power Plant from our hill at night. And Luke said, I understand, Teresa. You are probably the most -- you are probably the most affected landowner as far as what you're going to see in Codington County. Which I don't agree with that. I have more than me obviously. But I was terrified.

But my sister and I got up to leave after the meeting and Nate, I believe his name was, stopped and
tried to talk to me and my sister, but the only thing that they did was talk about how good wind was. And I said I don't want -- at this time I have nothing to say because nobody's talked to me about it, and I'm seeing where you're putting things so I have nothing to say.

Nate did call me a week later, but I was not home so he left a message. That's -- so I talked to my husband, Dan, about it, and he said wait until I get home. He usually works three weeks at a time and then is home for a week. So I waited for him to get home and by the time he had got home I had done some research on what this was all about and we both decided at that time we had nothing that we wanted to talk to wind about because we only owned 15 acres and assumed we had enough land for them to worry about and that's why we were not contacted in any way by them.

After that happened I just -- my niece Jennifer, she is a mayor of a small town Altamont in Deuel County. They were going through wind there. And so she was very aware what was going on so $I$ was asking her how things were going. In turn with that, we ended up meeting a lot of people who were as concerned as we were, me and my husband. That's how we kind of met everybody.

And one night $I$ got a call from Mr. Jamie Doland from South Shore. He's on the Punished Woman Lake

Association. He asked me to come to their meeting and sit in on it and see if there was anything that $I$ could just make sure that they were asking the right questions or answering the right questions and I'm like I don't know anything, Jamie, but $I$ will come.

So I went to that meeting. David Lau attempted to give a presentation at that meeting, but he was asked questions that he was unable to answer or would not answer so Jamie Doland ended that portion of the meeting and asked David to leave, which he did. And then $I$ went home after the meeting.

And $I$ didn't ask really anything at the meeting.
I don't remember saying anything at the meeting. But anyway I got home. My phone rang, and it was David Lau. He said, hey, this is David Lau, which I did not know that he was a local man because $I$ did not know him. Anyway he called, and he said -- he said, I understand you had some questions unanswered. And I said, I don't have any questions. And he goes, well, I'd like to talk to you sometime next week. And I'm like, I don't know when Dan is coming home yet. Because we don't always have a set schedule. I said, so we're going to have to -- call me at a later time, and I'll try to reschedule.

And at that time when he called the next week I
said $I$ was actually on my way to work, and $I$ said I'm on my way out. I will be gone. And then my husband came home I believe the following week when David called again.

And granted when we talked the night after the Punished Woman Lake Association meeting he asked me questions about my property and, of course, not thinking anything I just -- I just told him basically what we had put into our property and how much it meant to us really.

I'm like, you know, we put our whole heart and soul and this is our retirement and that was the end of our conversation.

He did contact my husband about a week later. I answered the phone and it was David and I handed it to my husband and I don't know what was said because I was doing laundry so $I$ just walked away. And that's -that's all the conversations I have with him.

So today when he started to talk about -- and I know you brought him in because I had said his name earlier so that's fine. I don't have an issue with that. That's not a problem at all.

It's just $I$ will actually see if $I$ can get my husband up here, Daniel, because he -- this is really close to his heart more so than mine. Because it's going to affect his future in their -- him and his father's
future together. So I don't know. That's really all I have to say about it.

I did not ask to be thrown in this pond. But I have come to actually enjoy like today and yesterday. I don't know why. Maybe because I've had so many sleepless nights, and now $I$ can feel it, you know, just kind of -it's either going to be done and I'll have nothing else to say or do, but $I$ am worried about the possibility of having to either sell my property, that $I$ can't live there, or not be able to sell it and still not be able to live there. So I am terrified just due to the closeness of these towers.

And I will see almost every 72 tower from my home, especially my second story of the house. So please don't put flashing red lights on there. I beg of you that because it will take every reason that $I$ live there away. And that's really all $I$ have.

MS. CREMER: So I think that was one of the conditions you wanted us to consider.

THE WITNESS: Yes.
MS. CREMER: Did you have anything else that you can think of?

THE WITNESS: I guess I have learned through the thing that maybe for homes that are so close to these towers and are around it and are going to experience
shadow flicker that just given -- or bestowed on them or however you say it, have they ever thought about doing a property value guarantee so $I$ don't lose money?

Because we were going to side our house. That was what we had -- we had the financing all set to side our house in May. And when we got that notice I actually called the bank and said I'm not going any farther -- I actually contacted my insurance agent because they wanted us to side it and it would actually help our rates, our, you know, insurance rates. And I said I'm not siding it because I might lose my money. I'm going to have to hold off and see how this goes.

So I'm very worried about that, and that's why I asked Mr. Wade Falk if he wanted to be my financial advisor. Because he might tell me what $I$ should do and not be afraid to move forward, but I am.

MS. CREMER: Okay. And if that's the end of your direct, $I$ got the impression it was, then we will ask Dakota Range if they have any cross.

MS. SMITH: No. I have no questions. Thank you.

MS. CREMER: Staff.
MS. REISS: Yes. Thank you. I have just a few.

## CROSS-EXAMINATION

BY MS. REISS:
Q. Ms. Kaaz, when you spoke about the flashing lights in the condition, can you clarify what you would be requesting the condition would be?
A. Yes. I would request that they use the aircraft detection lighting system only. That's it.
Q. Thank you.

As you testified you spoke about a certified letter you received from the company?
A. Yes.
Q. Do you recall that?
A. Yes.
Q. When did you receive this letter?
A. If you hold on, I can go grab it. I've got the letter.
Q. Do you have the approximate time frame where you received it?
A. I believe it was June when we received the certified letter, but I'm not positive.
Q. Do you recall what year that was?
A. That was in 2017.
Q. And, Ms. Kaaz, were you present when Mr. Lau testified yesterday?
A. Yes, I was.
Q. And did you hear him testify that the company offered you a good neighbor contract at some point? A. I was here for that.
Q. Are you aware of such an offer?
A. No. I have never been offered anything. I've never seen what you're talking about as far as an offer of any kind.
Q. Okay. And did anyone from the company contact you prior to that letter you received in approximately June of 2017?
A. No.

MS. REISS: Staff has nothing further.
Thank you.
MS. CREMER: Thank you. That would take us to Commission questions.

Commissioner Nelson.
Oh, wait a minute.
Ms. Mogen. I'm sorry.
MS. MOGEN: Thank you.

## CROSS-EXAMINATION

BY MS. MOGEN:
Q. Teresa, that letter that came in 2017 , what was that notice to?
A. It was notice to the codington County Planning and Zoning Meeting. I believe it said looking at -- or I
can't remember. It was something to do with the Conditional Use Permit.

I did not know they were giving it that night. I did not understand it until they did.
Q. Before that time had you heard about a wind project in your neighborhood?
A. Absolutely not.
Q. Mr. MaRous had said he evaluated or reviewed the two appraisals on your property. And do you know when the last one was?
A. The last appraisal $I$ believe actually -- well, we contacted the bank after that was brought up and got the files brought to us. But it was dated August 1. When my husband was home in May, home at that time, that's when we rolled over our building loan because we already had financing for the siding so we wanted to finish that up. Because you have to pay interest on the building portion of it so we asked them to close it up so the bank did that appraisal.
Q. So are you saying the appraisal was ordered in May? A. Yes. I asked McKenzie today when I called her, and she said, yes, it was ordered -- I think, and I'd have to look back, but $I$ think Dan was home at that time in April. Because our anniversary is on April 27, and he was home for our anniversary.

And that was when we decided then to contact the bank because the interest rate was going to go up another quarter percent on our building loan, and we were just finishing up -- we had the house done and the interior, and we were just going to finish up that garage. I said, let's just get it over, done and rolled out. So that's why they ordered the appraisal.
Q. And when was the Conditional Use Permit approved in Codington County?
A. I believe that approval was like -- was it September?
Q. June.
A. June. Okay. I apologize.
Q. Okay. And when did your bank first learn -- or your banker. Let's just say your banker, first learn that your home would be in a turbine project?
A. Last week.
Q. Okay. Are you -- are there any specific concerns you have about turbine number 67?
A. I am terrified about turbine 67. After we heard about this project we drove down -- we were going to Lowe's anyway because we love Lowe's. And so we drove past those turbines.

And I was still -- didn't know anything about it but we weren't there for more than five minutes and I'm like
we need to leave. I don't like this. And we left. That was my first -- what do you call it -- physical turbine knowledge.
Q. Before the hearing at the PUC did you ever hear or even know the term good neighbor contract?
A. No. I did not.
Q. So this is the first time you've heard that term?
A. Yes.
Q. At the PUC?
A. Yes. Actually this week was the first time when you said it in talking, and I'm like what's that?
Q. What do you -- do you think the turbines will impact your health?
A. Yes. They already have. Sleepless nights.

When we moved our house on $I$ had a choice of what direction to face it. I could either face my house to the west and look out over the valley that way or I could face it over to the east to look out the valley that way.

I chose the east so I could look out over the valley that way because it was so beautiful, and it's a valley that goes -- it's like a mile across the valley so that's why I chose that.

So that turbine terrifies me that it's going to be right at my window, so close, and it's going to loom over my house.

The other one worries me just as much, even though nobody wants to talk about that one either. But that one I get to see out my living room window where I -- I sit kitty-corner from that window. My husband sits over here. You know how you always have your spot in the living room.

Every time $I$ sit down in that chair during the day when I take a break I do what I'm doing right now. I try not to.

My friends don't even want to talk to me anymore because they're tired of hearing about my turbines. And I apologize for that, but it's so hard because I somehow feel responsible to make sure that it doesn't happen to everybody in our area.

I have grown up in northeastern South Dakota, and I apologize, Commissioners, because my husband says when $I$ get like this he just zones me out and doesn't listen so I have -- I can feel how they feel, and I apologize for that. But dear friends that we have met through all of this in Clark, we met them last year after the Conditional Use Permit because my husband is from clark. His grandpa was from there. And I said -- and he said something about that he had heard they were fighting turbines up there so he called his -- I believe his uncle and said do you know anything about this? And he said
yes, I do. I know this couple.
So we were lucky enough to meet David and Darci Adams. And we went there that night and they told us about it and when we left she grabbed my hand and prayed. I had never met her.

She said I don't want you to worry, Teresa, but in our world -- and I apologize for the words that we use but big wind will not stop until they cover northeastern South Dakota somewhere between 12 and 1,500 turbines. I thought she was full of it. I literally did. But now they just keep coming and coming and coming, and it's basically for the tax credits.

It's sad that our community's going to change, our reason for living here is going to change. And I don't know where to go. We've both lived here our whole life. I said I don't know what to do, Dan. And he doesn't either.

But $I$ cry way more than he does. He just drinks beer and gets mad. And I really worry. I'm a kind person. I've never wanted to punch somebody in the face that's way taller than me, but that's just being honest in how $I$ feel so that's --

And when you talk about the logistics there is a lot of logistics. I apologize for crying. And $I$ do know way more than $I$ ever thought $I$ wanted to. So basically if
you have any questions that you want to ask me, I will answer them. Because $I$ have studied as much as I possibly can.

MS. MOGEN: I'm finished. Thank you.
MS. CREMER: All right. Now we're to Commissioner Nelson.

COMMISSIONER NELSON: Thank you for being here. The other thing I want to thank you for is I've read your story. I've read your husband's story. And it's a story of two people that have grit, two people that had a vision and didn't stop and aren't stopping to fulfill the vision that you had. I admire that tremendously.

THE WITNESS: Thank you.
COMMISSIONER NELSON: Questions.
The issue of setbacks from residences. I know that Codington County Commission has dealt with that issue. Currently the county setback's 1,000 feet.

Did you testify to your County Commission or to any of your Commissioners in regard to what the setbacks should be in Codington County?

THE WITNESS: No. The Conditional Use Permit was granted that first hearing. And I never got any information prior to that night. So that thousand feet is what this Application could have followed, and that would have been a 1,000-feet setback.

COMMISSIONER NELSON: Since that time $I$ believe the Codington County Commission has dealt with the issue of what should those setbacks be going forward.

Did you testify to them or talk to any of them about that issue?

THE WITNESS: I believe that -- I know I have talked to them several times in, you know, sometimes -there was one meeting I think I got up like five different times and my husband got up several times and other people did. But $I$ have talked to them.

COMMISSIONER NELSON: What did you advocate for for an appropriate setback in that county?

THE WITNESS: When I learned a lot about wind at that time -- because these are 500-foot turbines, and they've not been used in South Dakota. They've actually first known as offshore turbines, and the size of their wings are massive -- I pushed for a two-mile setback with a waiver, which means anything within that two miles they would need to contact that landowner and discuss a waiver that they would sign stating the tower could be closer, whichever they felt comfortable with.

And $I$ know it's logistically very hard to do, but it is the safest setback for turbines of this size.

COMMISSIONER NELSON: Thank you. That's all the questions I've got.

MS. CREMER: Thank you.
Chair Fiegen.
CHAIRWOMAN FIEGEN: Thank you once again for coming. It is -- it makes me proud.

THE WITNESS: Thank you.
CHAIRWOMAN FIEGEN: I'm going to ask you the same question that $I$ did Kristi.

Can you see the flashing lights of any other wind turbines on where your home sits right now?

THE WITNESS: No. There's no wind turbines in view of our home.

CHAIRWOMAN FIEGEN: All right. So that's a condition that you stated earlier that you would be interested in as the aircraft detection system; correct?

THE WITNESS: Yes.
CHAIRWOMAN FIEGEN: Okay. I have no further questions.

Thank you.
COMMISSIONER HANSON: I'm petrified to ask you a question.

THE WITNESS: I don't bite. I cry. I'm going to try not to.

COMMISSIONER HANSON: I just want to come to your husband's defense.

THE WITNESS: Oh, I know. He's -- he's gotten
great over this house. He has. I've drove him crazy. COMMISSIONER HANSON: Well, there's such a thing called husband hearing, and $I$ think we all have it.

COMMISSIONER NELSON: Speak for yourself.
COMMISSIONER HANSON: It takes a lot of courage to come before the -- a formal hearing like this, go through this process, and $I$ know it's been an adventure for you and for Ms. Mogen as well. And $I$ just want to congratulate you for the story you've been able to tell, the process that you've gone through. And we appreciate that very, very much. We need to have that understanding.

We go through reading a tremendous amount of information. We look at economics and environment and such like that, and very often the human story is left out of it so I appreciate that very much.

THE WITNESS: Thank you. Thank you.
COMMISSIONER HANSON: So I don't have any questions for you.

THE WITNESS: I was ready.
COMMISSIONER HANSON: Thank you.
THE WITNESS: Thanks.
MS. CREMER: Unless you have some concluding remarks, you can step down.

THE WITNESS: Just think about what you're
asking the citizens of these counties to -- what you're asking us to change about our lives. Because we're affecting Deuel County, Codington County, Grant County, Day County, Roberts County. Those are just a few that I know of.

So when you look out here from Pierre you might see our turbines in the corner of the state. So just remember that. It's going to be a lot. I would rather have seen turbines go up in every county across South Dakota, maybe, you know, in locations of 10 , clusters of 10 , you know, across rather than just coming through there. Because wind does blow all over the state of South Dakota, not just us.

That's my conclusion.
MS. CREMER: Thank you.
(The witness is excused.)
MS. CREMER: I believe that concludes --
COMMISSIONER NELSON: I think she had some
rebuttal witnesses, perhaps.
MS. CREMER: Well, yeah. And I was going to see if she was going to do anything further.

COMMISSIONER NELSON: Okay.
MS. KAAZ: Is it okay if $I$ bring up one person to talk about this?

MS. CREMER: And, again, there wasn't any
prefiled testimony and all of that, but $I$ will ask Dakota Range, do you object to --

MS. SMITH: Well, I guess I will just point out that there isn't rebuttal for anyone except for the Applicant. So we may state for the record that we object, and we understand what is done with that is done with that.

MS. CREMER: Okay. Staff, do you have any objection to -- and I assuming you're talking about calling your poor, berated husband?

THE WITNESS: Yes. I originally was going to bring him up just to go over his comments, and that's why he's on my witness list. So I had copied his comments to go over them, but $I$ understand you all read them, which I'm very happy with.

But due to the fact that he was spoken about this morning by Wade and by David Lau, I think he should be able to talk about that and what he remembers about that same thing.

MS. CREMER: Okay. And, Staff, do you have an objection?

MS. EDWARDS: While I hate to set a precedent of allowing witnesses to testify without prefiled testimony, I think I can say for Staff that $I$ never intend to agree to that particular element of the procedural schedule
again and, if necessary, would agree to stipulate to amending it to allow him to testify.

MS. CREMER: And so $I$ will turn to the three Commissioners and ask what you would like to do at this point.

CHAIRWOMAN FIEGEN: Fine hearing him.
COMMISSIONER NELSON: I would agree. And for
Ms. Edwards' benefit, I can assure you that I will not agree to that particular provision in the future again either.

MS. CREMER: With that, then you may call Daniel to the stand.

MS. KAAZ: Okay. I call Dan Kaaz.
Dan Kaaz,
called as a witness, being first duly sworn in the above cause, testified under oath as follows:

MS. CREMER: So I will let you ask him the questions. And remember he's under oath so feel free to ask him anything.

MS. KAAZ: Where were you on --
DIRECT EXAMINATION
BY MS. KAAZ:
Q. I was going to ask you to describe our home but I did that and I'm sorry $I$ butted in again. But I did hear you were listening to the hearing this morning?
A. Yes. Yes, I was.
Q. Okay. Would you like to reiterate on anything that was spoken by Mr. Wade Falk?
A. Well, as far as by any of these, I guess I'm greatly disappointed. I had heard something this morning and this afternoon about a good neighbor clause.

To me a good neighbor is the guy that picks up your mail while you're on vacation. You know, if -- he helps you out. I have heard nothing of any good neighbor contract, clause, nor have any of my neighbors.

Shortly after we got the certified letter about the PUC meeting, the first one, we made a lot of copies, and we drove around talking to our neighbors. It was a Sunday afternoon, and out of the six people we stopped and talked to, two of them had been contacted by the wind turbine companies. Nobody else had any idea.

I spoke with Joe Waldren -- excuse me. I always screw his name up. He lives by the Interstate with his family, and that was the first time that $I$ met him. And I showed him a map, and $I$ said, have you heard anything about the turbines coming? And he said, I've heard rumors, but they're miles away. And I pulled out the map, and $I$ said you have one about 1,500 feet from your house. He said, well, that's not possible.

I showed him the map, and that was quite an eye opener for him, as well as Wade Bauer, my neighbor to the north. He had not been contacted.

And I guess I don't like the way the business is being put out there. If I'm going to do something on my property and you're my neighbor and it's going to affect you, I'm going to come to you face to face and I'm going to say, hey, I got this project going. It could affect you. Just a heads up.

And we're finding this stuff out so far late in the game it's really hard to play catch-up.

And in my defense $I$ only have a few beers so -MS. KAAZ: He's on vacation right now.
Q. Dan, would you have purchased your home knowing when turbines would be within two miles?
A. No. No, I wouldn't have. You know, when I first -when you first hear about wind turbines you're like, oh, it's green. It's great. Saving the planet. Great energy and all of that.

And after you actually dig into it and you do the research, no. I guess I should probably not go much further, but $I$ guess, in my opinion, a wind turbine is about as green as my old ' 82 suburban diesel was. It was green when it wasn't running.
Q. Thank you for answering that question without me
having to ask you twice.
How do you feel about us having -- or having to prove the safety zone -- Dakota Range having to prove the safety zone and getting the manual being requested upon them with these setbacks for both lay people and trained engineer workers? I mean --
A. In my opinion, I work in the oil field. Safety is paramount. At any time for any reason anybody can stop what's going on and say we're done here. stop. Safety is paramount.

And as far as not having a manual and saying that it's preparatory, $I$ have a hard time believing that. If I go down to your Chevy dealership and $I$ buy a car, in the glove box there's an owner's manual. If $I$ want to work on it, $I$ can go online. I can call a mechanic. I can get a manual.

Anything on that turbine, if it has sensitive designs or whatever, it is protected by a patent. And to not -- in my opinion, why you're not seeing the manual is it's going to say about a safety setback and how far you should stay from that. And if that comes up, it's not going to be good.

But the other way to look at it, if something would happen to someone -- and I'm -- granted I'm spit balling here. I'm talking absolute worst-case scenario. If
someone would get hurt because of these things, the manual's going to come out then. One way or another an attorney will get a manual. Nobody wants to be on the side of negligence, especially if it costs somebody their life.
Q. Thank you, Dan. Can I ask you one more question?
A. Okay.
Q. What has this done to your family?
A. Oh, boy. Well, we don't talk much anymore.

I was over and we worked some cattle a week ago but wind never came up. We don't talk about it. When they had signed the contract they thought it was just for a met tower. And my father's exact words were, "I should have read it better."

He didn't understand he was signing his land away for 30 years and for possibly more than just a met tower. But yeah. That's the other thing that $I$ really dislike about what this does.

I got a couple friends I used to ride motorcycles with. We don't talk anymore. One of them had even gone out 11 o'clock at night. He hit a deer with his motorcycle. I picked him up off the road and his motorcycle off the road, and we don't talk anymore.

I have another that -- you might get the impression I ride motorcycles once in awhile, okay. I'm sorry. We
used to always go to Bradley, and they have this little rally once a year. In fact, I believe it was last week. He used to always camp with us and that, and we don't talk anymore.

I guess it's -- you're either for wind or you're not for wind. There is no middle ground. And I guess I -costs friends, costs family. It sucks.
Q. Are you going to be able to fulfill your dream of taking over your grandfather's homestead at any time in your life?
A. Honestly, I don't know. I don't know.

Yeah. That was kind of always the plan. I have two sisters. I'm the only son. So it's kind of assumed that the boy would take over things. And, in fact, up until last fall $I$ was talking with dad, and $I$ was thinking I'm getting out of my current situation and going farming.

And with this going on, honestly, $I$ don't know. It's up in the air. I don't know what this is going to do to my property. Because the original plan for our property, and she did call me one night at 10 o'clock to tell me she had bought the house. I didn't know she was looking at it or nothing. She completely surprised me.

But in either case, our plan for that entire house
was to make it a home and to really -- I'm not saying build a mansion but, I mean, build it nice. You know, we had lived in that trailer house for 20 years, and it was in need of a lot of repair. It was needing a roof and carpet, and it just seemed like a waste to me.

I wanted to put it into a home, and I wanted a nice home, the kind of home that you have Thanksgiving and Christmas and your friends come over and you're like, hey, look at my beautiful house.

I mean, we did all the floors ourselves, hardwood floors. We even went to Minneapolis to find replacement hardwood floors for the kitchen.

There's a buttload of time and money in that house. It's actually magnificent. And every time $I$ would come home she was watching these DIY shows and -- and she knows her stuff. I mean, jeez. Even the tool catalogs come in her name and not mine because she orders tools. And she uses them. And she still has all her fingers too. She's good.

But that was our plan, to make the home nice so that some day when we get old and we can't take care of it anymore you can sell it and you can ask a good price for that because people can walk in and in five minutes you can go, well, gee, this is nice or they really cheaped out on us. I mean, we went with -- we did the house
nice.
And now there's discrepancy as far as what it's going to do to the property value. That's another thing. If they say there's no property value loss, hey, throw in a guarantee. If I'm not afraid of something, I'll guarantee it, you know.

Why do cars have warranties? They guarantee it. It's not going to break down, you know. And if they're standing up there saying there's no property loss, there's no property loss, fine. Guarantee it.
Q. Were you planning on being an Intervenor with us as well?
A. Actually I was and because I was so smart I had signed the paperwork and $I$ neglected to get it notarized. Stupid, stupid man.
Q. So there would have been a lot more of us if we all understood the process?
A. Oh, yes.
Q. What time was involved? Yes?
A. Absolutely.
Q. Okay.

When did you first meet Kristi Mogen?
A. Oh, boy. About -- what are we, in June now? I want to say it was November, December-ish.
Q. Okay.

MS. KAAZ: I just wanted to let you know that most of our friends that we now know are new additions to our friends, and the number that we have lost almost equals the amount that we have gained.

But I have no further questions for Dan.
MS. CREMER: Thank you.
Dakota Range.
MS. SMITH: I have no questions. Thank you.
MS. CREMER: Staff.
MS. REISS: No questions. Thank you.
MS. CREMER: Ms. Mogen.
MS. MOGEN: No questions.
MS. CREMER: That takes us to Chair Fiegen.
CHAIRWOMAN FIEGEN: No questions.
MS. CREMER: Commissioner Hanson is shaking his head no.

Commissioner Nelson.
COMMISSIONER NELSON: Thanks for being here. No questions.

THE WITNESS: Thank you for your time. I appreciate it.

MS. CREMER: You may step down. Thank you, very much.
(The witness is excused.)
MS. CREMER: With that, I believe Ms. Mogen
and Ms. Kaaz have presented their case; is that correct?

MS. MOGEN: Yes.
MS. KAAZ: Yes.
MS. CREMER: That would take us to rebuttal. It's 5 to 5:00 or close to that.

Dakota Range.
MS. SMITH: So I think what we discussed earlier on the manual and perhaps -- can we take a short break to see if we can get resolved the one issue that we had to try to get the manual?

MS. CREMER: Yeah. And then so when we come back what's your plan then?

MS. SMITH: You know, I think if we are able to get it, it's clear that everybody's going to want to -the Commissioners are going to want to see it and have it.

So I think our plan would be to come back in the morning to finish with our witnesses so we can give time to look at it. So if we could do that and get this issue resolved, that would be great.

MS. CREMER: So be done right now until tomorrow morning, or do you need to come back?

COMMISSIONER NELSON: Let's find out if we can get it.

MS. SMITH: You guys want to know -- I don't mean you guys.

The Commission wants to know if they're going to have it. So if you can give us a few minutes to see if we can work out that out, maybe 10 minutes, we can come back and kind of finalize for the day.

MS. CREMER: So that sounds. Let's stand in recess for about 10 minutes and see what Dakota Range can tell us.
(A short recess is taken.)
COMMISSIONER NELSON: How many pages will this document be?

MS. SMITH: That's a good question. It's quite a few pages.

COMMISSIONER NELSON: In excess of 1,000?
MS. SMITH: No.
MS. AGRIMONTI: But I'd have to look. One moment, please.

MS. CREMER: What we're trying to determine is a time -- because by the time it gets posted tonight and then people have an opportunity to look at it either tonight or in the morning, we're trying to figure out a time to start in the morning.

So, I mean, is it 50 pages, do you think, or is it 200?

CHAIRWOMAN FIEGEN: And is there a section that is safety, or do we have to read the whole thing to pick out the safety portions?

MS. SMITH: So what $I$ can tell you is it's kind of in multiple parts. And it does have a table of contents so you could reference to the table of contents. You know, there would be the ability to search it as far as a pdf as long as you have a search capability.

So that's kind of what we can tell you. This one -- is this the combined one?

It is approximately 600 pages.
MS. CREMER: Okay. With that said, we'll adjourn for the today.

MS. SMITH: Prior to adjourning, I believe you wanted me to offer this so that it's appropriate for the Commissioners to review.

So I believe we've designated it A22, and I would offer A22 into the record.

MS. CREMER: Thank you.
Staff, do you have any objection to A22, which is the safety manual they are --

MS. REISS: No, we don't.
MS. CREMER: Ms. Kaaz, do you have any objection to A22, which will be the safety manual?

MS. KAAZ: No. I have no objection.

MS. CREMER: Okay. Ms. Mogen?
MS. MOGEN: No objection.
MS. CREMER: Thank you.
With that, the A22 is admitted.
We will adjourn for the night, and the hearing will start at 10 o'clock tomorrow morning.

Commissioner Nelson.
COMMISSIONER NELSON: Yeah. I guess one more question.

So if we have questions on the contents, is that all going to be a confidential discussion tomorrow? And who will be the witness that can answer those?

MS. SMITH: We are still talking amongst ourselves. It's probably going to be Ms. Gunderson that would address -- obviously, this is not our manual so we're not speaking to it as the expert on the manual but more in our review, and if there's a question, we would address it.

If the manual does need to be referenced, it would need to be confidential. If there's a general discussion about it, I do not think it would need to be.

COMMISSIONER NELSON: Okay. Thank you.
MS. CREMER: Is there anything else that needs to come for us tonight?

Seeing nothing, we will see everyone at
10 o'clock in the morning.
(The hearing is in recess at 5:15 p.m.)
(The hearing is in recess at 5:15 p.m.)
10 o'clock in the morning.

STATE OF SOUTH DAKOTA) : S S

CERTIFICATE
COUNTY OF SULLY )

I, CHERI MCCOMSEY WITTLER, a Registered
Professional Reporter, Certified Realtime Reporter and Notary Public in and for the State of South Dakota:

DO HEREBY CERTIFY that as the duly-appointed shorthand reporter, $I$ took in shorthand the proceedings had in the above-entitled matter on the 13 th day of June, 2018, and that the attached is a true and correct transcription of the proceedings so taken.

Dated at Onida, South Dakota this $22 n d$ day of June, 2018.
/s/ Cheri McComsey Wittler
Cheri McComsey Wittler, Notary Public and
Registered Professional Reporter Certified Realtime Reporter

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