

In The Matter Of:
LIVINGSTON COUNTY ZONING BOARD OF APPEALS

January 22, 2015

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1 LIVINGSTON COUNTY ZONING BOARD OF APPEALS
 2 CASE SU-7-14
 3 PLEASANT RIDGE WIND ENERGY PROJECT
 4
 5 January 22, 2015
 6 6:30 PM
 7 Walton Centre
 8 100 West Locust Street
 9 Fairbury, Illinois

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1 (Commencing at 6:39 p.m.)
 2 **CHAIRMAN CORNALE:** All right, everybody,
 3 we'll go ahead and get going now. Appreciate your
 4 patience here at the start. We tried to get some of
 5 these exhibits over here, we haven't accepted any of
 6 them, but they'll be easier to hand out later. Save
 7 some time as we go.
 8 So with that, Chuck, roll call please.
 9 **MR. SCHOPP:** This is the January 22nd,
 10 2015, continuation hearing of Livingston County
 11 Zoning Board of Appeals review of the Livingston
 12 County Zoning Case SU-7-14, Pleasant Ridge Energy,
 13 LLC, Pleasant Ridge Wind Energy project.
 14 Michael Cornale.
 15 **CHAIRMAN CORNALE:** Here.
 16 **MR. SCHOPP:** John Vitzthum.
 17 **MR. VITZTHUM:** Here.
 18 **MR. SCHOPP:** Richard Kiefer. Diana
 19 Iverson.
 20 **MS. IVERSON:** Here.
 21 **MR. SCHOPP:** Howard Zimmerman. Joan
 22 Huisman.
 23 **MS. HUISMAN:** Here.
 24 **MR. SCHOPP:** Gibs Nielsen. A quorum.

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1 **CHAIRMAN CORNALE:** All right. With that,
 2 I just want to thank everybody for their continued
 3 interest in this process. As everybody knows, it is
 4 a lengthy process. We're working our way through
 5 it. We're doing pretty well. I just want to take a
 6 quick second to remind everybody, regardless of any
 7 opinion or any -- any feelings you may have,
 8 witnesses are brought here to gather information
 9 from and we hope that you can at least give them the
 10 opportunity to have your attention while they do
 11 present either way.
 12 So with that, I believe it's the Zoning
 13 Board of Appeal's opportunity to question Dr. Punch.
 14 **MR. LUETKEHANS:** Mr. Chairman, at the end
 15 of the meeting you suggested, and I think Dr. Punch
 16 would like to kind of expand on a couple of the
 17 ideas that were yesterday, because he was running
 18 through them pretty fast at the end. So if he could
 19 have just a few minutes at the beginning. I didn't
 20 mean to interrupt, I apologize.
 21 **CHAIRMAN CORNALE:** Okay. Yeah, I did, in
 22 fact, say that. So, Dr. Punch, go ahead and
 23 anything you'd like to add this evening. We did cut
 24 you short on time, but it was getting pretty late

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1 for everybody.
 2 **DR. PUNCH:** It was a long presentation. I
 3 would like to basically emphasize some additional
 4 points relative to my question four in the slides.
 5 It probably was one of the most important questions.
 6 It asked: What evidence is there that noise
 7 generated by wind turbines leads to adverse health
 8 effects in humans?
 9 I showed you a couple slides. Assuming
 10 everybody has a copy of these. Studies in slide 39
 11 all show that sleep disturbance is caused by
 12 exposure to low frequency noise, which includes wind
 13 turbines, although that particular study by
 14 Leventhall in 2003 did not talk about wind turbines
 15 specifically, but certainly wind turbines are known
 16 to produce low frequency noise including infrasound.
 17 Leventhall in the 2003 study that I
 18 mentioned was one of the authors of the AWEA, CanWEA
 19 papers, so -- that is the CanWEA and AWEA paper in
 20 2009 which is a review paper. He quotes -- quoted
 21 the World Health Organization at that time as
 22 saying, "It should be noted that low frequency
 23 noise, for example, from ventilation systems, can
 24 disturb rest and sleep even at low sound levels.

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1 When prominent low frequency components are present,
 2 noise measures -- noise measures based on
 3 A-weighting are inappropriate." He said that a
 4 pretty long time ago relative to the studies we've
 5 been talking about. He basically now denies that
 6 wind turbines cause adverse health effects. I find
 7 the discrepancy in his testimony and in his writing
 8 very interesting.
 9 The Minnesota report in that slide
 10 mentions that sleep disturbance is caused by many
 11 low frequency noises, including wind turbines
 12 specifically in that study.
 13 In her 2009 conference paper, Pedersen --
 14 it is pronounced Pedersen I think -- stated that
 15 sleep disturbance results from exposure to
 16 industrial wind turbines. In her 2011 paper, which
 17 was a peer reviewed journal article, she analyzed
 18 three field studies. Her findings were that sleep,
 19 headache, fatigue, tension, stress and irritability
 20 were all affected to a statistically significant
 21 degree by wind turbines.
 22 And when I mention turbines tonight, I'm
 23 always talking about industrial grade or industrial
 24 scale turbines.

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1 In slide 42 I mentioned the three
 2 cross-sectional studies that have been done, one by
 3 Shepherd and colleagues in 2011, one by Nissenbaum
 4 and colleagues in 2012, and Paller, et al., in 2013.
 5 All these studies showed a strong relationship
 6 between sleep quality or sleep disturbance and wind
 7 turbine noise exposure. I would also note that,
 8 again, that cross-sectional studies are embraced by
 9 epidemiologists as some of the best kind of evidence
 10 to show causation. Some of these same studies
 11 showed a reduction in the quality of life for people
 12 living near these turbines.
 13 In terms of the issue, in one or more
 14 slides of mine, I mentioned wind turbine noise is a
 15 direct or indirect cause of various problems
 16 including sleep disturbance, particularly sleep
 17 disturbance. Sleep would be the direct cause, and
 18 other effects that follow the prolonged lack of
 19 sleep are the indirect causes.
 20 So if you go for a long time without
 21 sleep, obviously some of you might have experienced
 22 this in your lifetime more recently, you might
 23 develop other problems. I went through a litany of
 24 these problems last night. I won't repeat them

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1 here.
 2 As I've said, both the National Institutes
 3 of Health in the U.S. and the World Health
 4 Organization believe that sleep disturbance results
 5 from a wide array of other disorders. Even if sleep
 6 were the only issue, and this is really important,
 7 it is enough to be taken extremely serious. If
 8 there's no other problems mentioned, sleep
 9 disturbance is a big problem, a big issue.
 10 Much is apparently being made of peer
 11 reviewed articles in this case. Many of the
 12 articles I offered in my presentation as evidence
 13 are what would be considered peer reviewed and some
 14 are not. It's interesting that many of the
 15 materials submitted as evidence or as exhibits by
 16 Pleasant Ridge are not peer reviewed, yet the board
 17 is being asked to consider those articles as factual
 18 evidence. I would just ask why are citizens
 19 objecting to this wind project being held to a
 20 higher standard.
 21 I just want to take a couple minutes to
 22 describe the peer review process as I see it. I'd
 23 like to offer my view based on my being a long-time
 24 submitter of articles to such journals and also as a

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1 reviewer for many peer reviewed journals over the
 2 years. I reviewed my last peer reviewed article
 3 about two or three months ago.
 4 Peer review is the highest known standard
 5 for publication in the scientific and professional
 6 world, but it is not infallible. Some peer reviewed
 7 journals are simply of lower quality than others. I
 8 mentioned last evening Crichton, one or more --
 9 actually the two Crichton articles, even though
 10 they're peer reviewed, I think meet a very low
 11 standard for quality. I don't know how many people
 12 reviewed those articles, but there were I think a
 13 lot of problems with those studies of the nocebo
 14 effect.
 15 A second point about peer review is that
 16 more and more journals are today going online to
 17 save cost and speed in the publication process and
 18 to enhance speed in the process of publication.
 19 Many print journals are going online. I pay for a
 20 number of journals myself, and now some of those
 21 journals that were available in print are no longer
 22 available in print, except for maybe some extra
 23 money. Some of them don't even offer that option.
 24 So everything these days, as many of you

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1 know, is going online essentially. Some of the
 2 material is available to the public now as opposed
 3 to only going to paying journal subscribers. That
 4 information hopefully will maintain its high level
 5 of peer review.
 6 Then there are some online journals that
 7 are going what's called open source, making it
 8 easier to publish at a faster rate, which seems also
 9 to be rushing the peer review process, getting
 10 people to review articles as fast as possible to get
 11 them online as soon as possible. I think that the
 12 peer review process is being jeopardized by that
 13 particular process.
 14 Another point is that some highly regarded
 15 journals, some that have the major -- the most
 16 impact in the scientific world, actually only use
 17 one reviewer. I recall in the Journal of the
 18 Acoustical Society of America, in which many
 19 acousticians and some audiologists publish papers,
 20 only one reviewer reviewed that paper. It's true
 21 that if one reviewer flags problems, indicates there
 22 are problems with an article, then the process
 23 usually involves appointing one or possibly another
 24 two reviewers. But that journal, above all, I think

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1 is an excellent example of a fantastic peer reviewed
 2 journal. So the number of people who review is not
 3 necessarily indicative of reputation of a journal.
 4 Essentially all conference papers are --
 5 and this is my last point -- are peer reviewed by a
 6 committee typically consisting of two to four
 7 experts, at least in my field, who are in the
 8 specialty area of the particular paper. These are
 9 from the same pool of experts who review journal
 10 manuscripts for publication. Although some
 11 conference papers that report only preliminary data
 12 are more likely to be accepted than journal
 13 articles, I would consider such papers as peer
 14 reviewed. And many of the papers I've listed in my
 15 reference list are, or some, at least a significant
 16 number, are conference papers.
 17 With this, I end my presentation.
 18 **CHAIRMAN CORNALE:** Thank you, Dr. Punch.
 19 All right. With that, it's the ZBA's opportunity to
 20 pose any questions we may have or we can certainly
 21 reserve that opportunity until everybody else is
 22 done. Do you guys have anything at this time?
 23 **MS. HUISMAN:** I have a few.
 24 **CHAIRMAN CORNALE:** Okay.

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1 **QUESTIONS BY**
 2 **MS. HUISMAN:**
 3 Q. Dr. Punch, Joan Huisman. I just want to
 4 clarify. You are not a medical doctor.
 5 **A. That's right, I'm not a medical doctor.**
 6 Q. In your training to be an audiologist or a
 7 Ph.D. in audiology, do you have to learn the inner
 8 workings of the ear?
 9 **A. Yes, anatomy and physiology of the ear are**
 10 **one of the myriad components of my training. I**
 11 **actually taught a course in anatomy and physiology**
 12 **for at least four or five years in the past ten**
 13 **years.**
 14 Q. And in your -- did you have like a clinic
 15 at Michigan State that you'd see patients?
 16 **A. We actually had a clinic when I came there**
 17 **over 20 years ago. We lasted for about 12 or 15**
 18 **years, and the campus shut down all clinics on**
 19 **campus that were not self-supporting. Since we were**
 20 **training students, we were not really**
 21 **self-supporting, so our clinic was closed at that**
 22 **point. I worked in the clinic primarily by**
 23 **supervising training and training students to learn**
 24 **to be audiologists up until that time.**

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1 Q. Did you take patients that, you know, like
 2 I don't want to say off the street, but --
 3 A. Yes, we did.
 4 Q. -- from outside the confines of the
 5 university?
 6 A. Yes. Yes, they did come from around the
 7 local area of Lansing, Michigan.
 8 Q. And you treated them for all types of
 9 hearing problems?
 10 A. Hearing impairments, hearing aids was a
 11 big component of our treatment for many of the
 12 patients.
 13 Q. Okay. Your list of references, is it your
 14 testimony that the majority of these are peer
 15 reviewed articles or what's your percentage --
 16 A. I think I -- sorry. I think I used the
 17 term majority. I don't know if I actually counted
 18 them. I've looked at them many times. I don't know
 19 if I counted the final list.
 20 The one -- I can tell you this. The ones
 21 that don't list a URL, an Internet address, are peer
 22 reviewed for sure. The conference papers, as I
 23 tried to mention in the outline tonight, I consider
 24 peer reviewed because they, in fact, get peer

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1 reviewed. I think all of those papers are either
 2 published or presented at conferences by reputable
 3 people who have many peer reviewed publications.
 4 Q. And in the peer review process, that's
 5 fact checking, all sources checked?
 6 A. I'm sorry, I don't understand that
 7 question.
 8 Q. Just trying to clarify that peer reviewed
 9 means that the facts in the article or report are
 10 checked for accuracy?
 11 A. I think not in a check box line by line
 12 fashion, but certainly they're reviewed by, both
 13 papers and articles, by people who know the
 14 material, and they would see and flag any problems
 15 where there was a substantive error.
 16 Q. So your conclusions and your presentation
 17 and your information provided to us here tonight is
 18 based largely on peer reviewed articles that you
 19 would --
 20 A. I think you have -- I think you have the
 21 references. I have it, but it's not very practical
 22 for me to sit here and count them right now. But if
 23 you counted the number of papers that don't include
 24 a URL, an Internet address, and count the number of

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1 conference presentations, I believe that's what I
 2 called them all, those are the number of peer
 3 reviewed articles as I would define peer review.
 4 The others are essentially reports. Some
 5 of those are articles used as exhibits, I think, in
 6 this case, in this -- by Pleasant Ridge, and some
 7 are reports of panels that were appointed by wind
 8 advocates in various places, in various states.
 9 Q. But your conclusions in your presentation
 10 are based on your own review of the articles listed
 11 or the documents listed in your reference list?
 12 A. That's right. Actually I might have made
 13 some statements that -- for which I do not include
 14 references. I have reviewed -- if you could tell me
 15 how many articles are on that sheet, I could answer
 16 this question better, but let's say there's 50. I
 17 don't know. I reviewed some 150 to 175 articles in
 18 the last two years, and I keep learning new things
 19 every day, okay? So -- does that answer your
 20 question?
 21 Q. That answers it, thank you. In the
 22 Michigan wind project that you visited, would you
 23 summarize like the number of complaints based on the
 24 size of that wind project? Were there widespread

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1 complaints? Were they limited?
 2 A. I think you're referring to the Huron
 3 County case, which was my first experience. I gave
 4 that example to indicate last night that I really
 5 didn't know anything about wind turbine noise at
 6 that point honestly. That was about 2009. And the
 7 family who called us to their home ultimately had a
 8 lawsuit, and since that time it's been settled I
 9 understand. They're still trying to get out of the
 10 house but haven't been able to sell it is my
 11 understanding.
 12 Q. But that was one family?
 13 A. That was one family. We informally, as I
 14 said, interviewed them. We sat down in the living
 15 room, talked to them and their two teenaged girls, I
 16 believe, about their -- I mainly was listening at
 17 that point, just trying to gather facts, see whether
 18 I might be interested in pursuing, you know,
 19 gathering more information about it.
 20 I didn't mention last night, but we also
 21 interviewed, we talked -- we basically just talked
 22 to two or three other families in the neighborhood.
 23 I can't say that the problems were that widespread.
 24 I really was admittedly fairly naive about what

1 questions I should be asking at that point.
 2 So we did talk to a number of families,
 3 and as I recall, the kinds of complaints they had
 4 were very much along the lines of those kinds of
 5 things we talked about last night in the
 6 presentation. Not all of those things necessarily,
 7 but it was kind of a mystery to them as to why they
 8 were feeling the way they were. But they knew, one,
 9 they didn't have these problems before the wind
 10 turbines came in, and two, when they left the area,
 11 they felt a lot better.

12 Q. I was just trying to ascertain if the
 13 complaints came from residences that were within X
 14 feet of a turbine or, you know, what were some of
 15 the factors surrounding -- I guess what were the
 16 circumstances?

17 A. Well, the turbines near the families that
 18 we interviewed were all within probably 1500 feet,
 19 at least one or two turbines within that range. The
 20 one I showed you last night in the slide was 1350
 21 feet from the back of the house I believe.

22 Q. Do you recall how large that wind farm
 23 was?

24 A. All those were, I believe, GE -- I may

1 -- you know, I didn't include any of that kind of
 2 information here.

3 I say that with the understanding and
 4 knowledge that some of these people, the people we
 5 met in Huron County in fact, were living in their
 6 basements and were trying to sleep in their
 7 basements actually and could not see much effect.

8 And the case that I presented also later
 9 on in that presentation last night who was -- the
 10 family also from Michigan who filed a lawsuit later
 11 in a different county, a different project, had put
 12 mattresses in their basement, I forget what other
 13 changes they had made, but they were not able to
 14 sleep in any satisfactory kind of way in their
 15 basement. So it's very hard to mitigate the very,
 16 very lowest frequency.

17 Now, higher frequencies can be mitigated
 18 easier, but I don't think putting up trees -- you
 19 know, a lot of big trees might help a little bit
 20 with the frequency range above 20 hertz.

21 Q. That's what I was looking for. Do trees
 22 matter? Can you turn the turbines in different
 23 directions to reduce the --

24 A. Well, I can't speak to directionality of

1 have the name -- I believe they were GE. I'm pretty
 2 sure. I know they were 1.5 megawatt turbines.

3 Q. I meant the number of turbines in the wind
 4 farm.

5 A. 46.

6 Q. Okay.

7 A. 69 megawatt total capacity.

8 Q. With your background in hearing and sound,
 9 do you have any other suggestions for mitigation of
 10 -- if someone's having or experiencing difficulties
 11 with what they think are sounds coming from a wind
 12 turbine, do you have any ideas on how to mitigate or
 13 reduce some of those effects?

14 A. Well, I believe I can talk more sensibly
 15 about what does not work to mitigate. It's very
 16 hard to mitigate infrasound. The lower the sound
 17 frequency, the further and wider the area that
 18 infrasound is going to travel.

19 I have read, and I unfortunately can't
 20 quote you a source, that the very lowest
 21 frequencies, below 10 hertz, would require
 22 one-fourth of the wavelength -- let's say a 1 hertz
 23 tone, a 1 hertz sound, would take a concrete wall of
 24 about 30 feet. Now that's what I've heard. I don't

1 the turbines themselves, but I would assume any
 2 changes you made in the pitch of the blades and so
 3 forth, if you could, what I call, feather the blades
 4 and tamp down, as we heard last night, that I think
 5 can keep the sound low.

6 Q. Okay, thank you.

7 MS. HUISMAN: That's all I have for now.

8 CHAIRMAN CORNALE: All right, the board
 9 will retain the opportunity to question later as we
 10 go through other questions.

11 All right, units of local government,
 12 school districts, anybody out there with those have
 13 any questions for Dr. Punch? I don't see any.

14 All right. Mr. Blazer, do you have any
 15 questions for Dr. Punch?

16 MR. BLAZER: What would you do if I said
 17 no?

18 CHAIRMAN CORNALE: Go ahead, Mr. Blazer.

19 MR. BLAZER: Thank you, Mr. Chairman.

20 QUESTIONS BY

21 MR. BLAZER:

22 Q. Dr. Punch, are you here as an audiologist
 23 or as an advocate?

24 A. I honestly don't know how to answer that

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1 because I was asked -- my understanding was I was
 2 asked by Phil Luetkehans to represent his clients,
 3 who are the United Citizens Group of Livingston
 4 County. It turns out that the material I have and
 5 what I believe seems to be that I'm an advocate, but
 6 I'm only an advocate in the sense that I come from a
 7 training background that includes the ear, sound and
 8 hearing and so on, and that that seems relevant here
 9 in the sense that the ear is the channel through
 10 which sound travels obviously to the brain.
 11 Q. All right, next question. You have your
 12 presentation I understand on your computer there.
 13 A. **I can pull it up right away, yes.**
 14 Q. Okay. Slide 3.
 15 A. **Okay.**
 16 Q. In here, you indicate that you have been a
 17 witness as a health expert in legal cases in Ohio,
 18 Wisconsin, Michigan, Iowa, Illinois, and Oregon; is
 19 that correct?
 20 A. **That's correct.**
 21 Q. And were all those wind proceedings?
 22 A. **Yes, two at the state level and the other**
 23 **four at the individual or group level.**
 24 Q. And in all those cases, who were you

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1 testifying for?
 2 A. **In Ohio, the Ohio Power Siting Board. In**
 3 **Wisconsin, the Public Service Commission.**
 4 Q. So when you testified -- I'm sorry, and in
 5 Wisconsin was that the Highland Wind proceeding?
 6 A. **It was not any of those proceedings like**
 7 **Shirley Wind or Highland. It was a state hearing at**
 8 **the service commission level --**
 9 Q. Well, what I'm --
 10 A. **-- to set guidelines.**
 11 Q. All right. Well, when you say legal
 12 cases, which is what you said on slide 3 --
 13 A. **Okay.**
 14 Q. -- I'm asking where you testified in legal
 15 proceedings not in --
 16 A. **Oh, okay. I didn't really understand the**
 17 **difference, I guess.**
 18 Q. All right. So in Wisconsin, you testified
 19 in the Highland Wind proceeding, correct?
 20 A. **Oh, yes, yes.**
 21 Q. Okay. And who was that for?
 22 A. **It was a citizens group.**
 23 Q. Opposing that project, right?
 24 A. **Opposing the -- yeah, that development,**

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1 **right.**
 2 Q. Okay. And which legal cases have you
 3 testified in in Illinois?
 4 A. **Oh, only this one. I listed it -- I said**
 5 **-- what I thought I said last night, including this**
 6 **case. This is the only one in Illinois.**
 7 Q. I see, okay. And the one in Michigan was
 8 also on behalf of opponents to a wind project,
 9 correct?
 10 A. **A family.**
 11 Q. Right.
 12 A. **Yes.**
 13 Q. Okay. I'd like to try and put some of
 14 this, before we go too far, in some historical
 15 context.
 16 A. **Sure.**
 17 Q. Could you pull up your slide 27? And you
 18 had talked about this last night as well. I want to
 19 ask you about the Taylor study.
 20 A. **Okay.**
 21 Q. And you said in discussing yesterday the
 22 Taylor study that his study did not use wind
 23 turbines on an industrial-scale size like the ones
 24 we're dealing here with. They were smaller

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1 turbines, correct?
 2 A. **Correct, they were.**
 3 Q. And I believe you said, and correct me if
 4 I'm wrong, nobody's ever said, that I know of, that
 5 noise from a small scale wind turbines -- rough
 6 transcript -- that's below, well below sometimes 1
 7 megawatt capacity causes any problems at all. Do
 8 you remember that?
 9 A. **I do remember saying that, yes.**
 10 Q. All right. Now, we know that
 11 utility-scale or, as you refer to them and
 12 opposition groups refer to them, industrial wind
 13 turbines have been around for a long time, right?
 14 A. **They have.**
 15 Q. All right. Especially in Europe?
 16 A. **That's correct.**
 17 Q. Okay. They date back to the 1980s?
 18 A. **At least. Many decades, several decades.**
 19 Q. Right. But they were smaller than they
 20 are today.
 21 A. **Most of them were, yes.**
 22 Q. Right.
 23 A. **If not all of them.**
 24 Q. And --

1 **A. That's true. I see where you're going.**
 2 Q. Right, and there have also been
 3 historically and even today what might be called, as
 4 opposed to again what you refer to as industrial
 5 turbines, personal wind turbines like the kind that,
 6 for example, a company might use to power -- just
 7 for its own power or even a farmer might use for his
 8 own energy needs, correct?
 9 **A. Right.**
 10 Q. All right. But those are again going to
 11 be smaller than, you know, use your word, smaller
 12 than the industrial turbines, the kind that we're
 13 dealing with here --
 14 **A. I think --**
 15 Q. -- correct?
 16 **A. -- a 1.5 is hitting that mark.**
 17 Q. Right. Below 1 I think we're at a smaller
 18 range.
 19 **A. Right.**
 20 Q. Is that a fair statement?
 21 **A. Exactly.**
 22 Q. Okay. One thing I'm going to ask you, and
 23 I know Mr. Luetkehans has said this a lot to a lot
 24 of witnesses, June is going to get more upset at me

1 Q. So according to you, it's because Mr.
 2 Taylor's findings don't relate to the types of
 3 turbines that we're dealing with here; is that
 4 correct?
 5 **A. That's correct, especially with regard to**
 6 **infrasound.**
 7 Q. Okay. Slide 13, please. Are you there?
 8 **A. Almost.**
 9 Q. Would it be easier if you had a hard copy
 10 because I can --
 11 **A. It would, but --**
 12 Q. No, I have one.
 13 **A. -- I can figure this out and move a little**
 14 **faster. I have it here.**
 15 Q. Here (handing document).
 16 **A. Okay.**
 17 Q. I have the one that your attorney gave me
 18 yesterday. Just make sure you give it back. It's
 19 my only marked copy. That might be easier for you.
 20 **A. Okay, thank you.**
 21 Q. So if you go to slide 13 then. Okay?
 22 **A. I still have to flip through them.**
 23 Q. Yeah, I know.
 24 **A. Okay.**

1 than you if we talk over each other, so I'd ask you
 2 to please -- there'll be a slight pause when I'm
 3 done asking a question, so if you could wait.
 4 Otherwise, the transcript gets very confusing, okay?
 5 **A. Go ahead.**
 6 Q. Thank you. Those smaller, less than 1
 7 megawatt turbines, are the ones that you say Mr.
 8 Taylor addressed in his report, correct?
 9 **A. Yeah, and I don't recall the size, the**
 10 **exact size of the turbines.**
 11 Q. But they were the smaller ones.
 12 **A. Yes.**
 13 Q. Okay. Do you have any issue with Mr.
 14 Taylor's findings besides that?
 15 **A. I would need to go back and look at the**
 16 **methods again. I brought all these studies. I**
 17 **haven't read every word of every study. I read at**
 18 **least an abstract or conclusion section. I've read**
 19 **many of the method sections, enough to understand**
 20 **what went on in the studies. I don't recall any**
 21 **other objections, but that was so big a one that**
 22 **I --**
 23 Q. Right.
 24 **A. -- made the statement that I did.**

1 Q. There are only 75 of them.
 2 **A. I'm glad you said that.**
 3 Q. All right. And I want to focus on the --
 4 what you say is the pro-health position, the third
 5 one.
 6 **A. Right.**
 7 Q. And you say sufficient anecdotal and
 8 scientific evidence exists to indicate that noise
 9 from turbines, directly or indirectly, causes sleep
 10 disturbance and a variety of other AHEs, correct?
 11 **A. Correct.**
 12 Q. That's not your medical opinion, is it?
 13 **A. It's my opinion as a researcher, as a**
 14 **scientist, as --**
 15 Q. That was not the question. That's not
 16 your medical opinion.
 17 **A. Not my medical opinion, no.**
 18 Q. All right. You have held a Michigan
 19 audiologist license, have you not?
 20 **A. I have.**
 21 Q. All right. That was from May 2007 to
 22 December 2009?
 23 **A. Your memory is -- or your facts are better**
 24 **than my memory.**

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1 Q. Exhibit 263, please.
 2 **MR. BLAKEMAN:** Did you say 262?
 3 **MR. BLAZER:** 3.
 4 **MR. BLAKEMAN:** 3.
 5 Q. Dr. Punch, Exhibit 263 I'll represent to
 6 you is a printout from the State of Michigan
 7 licensing authorities, and it reflects that your
 8 audiologist license lapsed in 2009, correct?
 9 **A. It did.**
 10 Q. And that is accurate?
 11 **A. I would assume that's correct.**
 12 Q. You're certainly not --
 13 **A. I thought it was a little more recent than**
 14 **that, but it's apparently not.**
 15 Q. You're certainly not a licensed
 16 audiologist today, correct?
 17 **A. I am not a licensed audiologist.**
 18 Q. Okay. And you're aware of what services
 19 audiologists can and can't legally provide, correct?
 20 **A. Yes.**
 21 Q. All right. Exhibit 264 and 265.
 22 **A. I would like a chance to respond, if I**
 23 **may, further.**
 24 Q. When there's a question pending, I'm sure

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1 you can.
 2 **MR. LUETKEHANS:** I would ask that the
 3 witness be given the chance to expand at this point.
 4 He's an expert witness. If he wants to expand, I
 5 think he has that opportunity.
 6 **MR. BLAZER:** I don't have a question
 7 pending yet.
 8 **MR. LUETKEHANS:** Well, he wants to respond
 9 to one you already had.
 10 **MR. BLAZER:** Doesn't sound that way to me.
 11 **CHAIRMAN CORNALE:** Mr. Punch, just let's
 12 let Mr. Blazer ask the question, another question.
 13 **A. Okay.**
 14 **CHAIRMAN CORNALE:** And if we can -- if you
 15 can work in what you need to, that would be fine at
 16 that point.
 17 **A. Okay.**
 18 **BY MR. BLAZER:**
 19 Q. I have handed you two documents there, Dr.
 20 Punch. They're both sections from the Michigan
 21 statutes dealing with the licensure and authority of
 22 audiologists. You recognize those, don't you?
 23 **A. Yes.**
 24 Q. All right. So Exhibit 264 is Section

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1 333.16801 of Michigan Compiled Laws. And you are
 2 aware, are you not, that the practice of audiology
 3 means the nonmedical and nonsurgical application of
 4 principles, methods and procedures related to
 5 disorders of hearing, correct?
 6 **A. Of course.**
 7 Q. All right. Could you turn to your slide
 8 number 54? I think it's going to be easier if you
 9 do the hard copy. You can take the clip off if you
 10 want. That might make it easier.
 11 **A. I might just leave it here. 54?**
 12 Q. Slide 54, correct.
 13 **A. Yes.**
 14 Q. All right. Question number 6, you say:
 15 What basis, if any, is there for medically
 16 diagnosing adverse health effects from exposure to
 17 wind turbines, right?
 18 **A. Yes.**
 19 Q. And you're certainly not making any
 20 medical diagnosis, are you?
 21 **A. Not myself, no.**
 22 Q. Good. You know that it would be illegal
 23 for you to do that.
 24 **A. Of course.**

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1 Q. Back to -- and, in fact, back to our
 2 Exhibit 264, under subsection 2. The practice of
 3 audiology does not include the practice of medicine
 4 or medical diagnosis, correct?
 5 **A. That's B under -- in Exhibit 264?**
 6 Q. 264, it's subparagraph 2.
 7 **A. I got you, okay.**
 8 Q. You see that?
 9 **A. Yes.**
 10 Q. The practice of audiology does not include
 11 the practice of medicine or medical diagnosis,
 12 correct?
 13 **A. Correct.**
 14 Q. All right. Now, if you could look at
 15 number -- Exhibit 265, and that's 333.16803,
 16 subparagraph 1. Even if you're doing the things
 17 that you are authorized to do as an audiologist
 18 legally, you can only do them if you are in fact
 19 licensed; isn't that right?
 20 **A. Well, I need to respond more fully, but**
 21 **that's correct.**
 22 Q. All right. Looking now at subparagraph 2
 23 of our Exhibit 265.
 24 **A. Okay.**

1 Q. You are aware, are you not, that under
2 Michigan law you can't even call yourself an
3 audiologist?

4 MR. LUETKEHANS: Are we in Michigan?
5 Objection. Are we in Michigan? Is this hearing in
6 Michigan? I mean, what's the relevance?

7 MR. BLAZER: He practices in Michigan, he
8 works in Michigan, he --

9 MR. LUETKEHANS: He's here to testify in
10 Illinois.

11 MR. BLAZER: Well, I'm not talking about
12 Illinois law. I'm talking about the law that he
13 functions under because that's where he works, lives
14 and has taught.

15 MR. LUETKEHANS: Is this opinion being
16 given under Illinois law or Michigan law?

17 MR. BLAZER: Is that a question or an
18 objection?

19 CHAIRMAN CORNALE: All right.

20 MR. LUETKEHANS: No, it's an objection.

21 CHAIRMAN CORNALE: Okay, all right. We
22 can all agree we're not in Michigan.

23 MR. LUETKEHANS: Thank you.

24 CHAIRMAN CORNALE: All right. But we need

1 licensure, and I was not going to be able to pay it
2 for nothing because I couldn't practice -- I wasn't
3 going to practice audiology at that point because
4 the Michigan licensure only allow, is only there
5 really -- and I was on the board of the Michigan
6 Speech and Hearing Association when that thing came
7 into being. It only allows -- it only is necessary
8 to have a license to be able to put ear mold
9 impression material in an ear because the hearing
10 instrument specialists didn't want that superseding
11 or that practice occurring by people who weren't
12 forced to pay the state money to do so because they
13 had to do so. That's my understanding.

14 I called the Michigan licensure board, I
15 called ASHA, the American Speech-Language-Hearing
16 Association, when I stopped paying my licensure fee
17 to ask them if I don't practice audiology, if I
18 don't fit hearing aids, am I still an audiologist?
19 And I am certainly under the ASHA rules. ASHA has
20 been around a lot longer than the Michigan
21 licensure.

22 Now that I'm retired, I'm not practicing
23 -- I'm not pretending -- I'm not proposing that I
24 practice audiology. I'm not here to practice

1 to decide how we're going to handle this.

2 AUDIENCE VOICE: Let him answer the
3 question.

4 AUDIENCE VOICE: Let him answer.

5 CHAIRMAN CORNALE: We -- all right. At
6 this point, you have something to add, and I believe
7 it may be valuable to the rest of this discussion.
8 So I'm going to allow you to add whatever that is
9 within the scope here to talk about licensure or
10 whatever it may be and maybe that will help to
11 clarify some things.

12 A. Okay. May I?

13 CHAIRMAN CORNALE: You may.

14 A. Thank you. There is Michigan licensure
15 that defines audiologists. There is also American
16 Speech-Language-Hearing Association's certification
17 process which also defines audiologists. The two
18 have been at war really for years, okay?

19 Some of my comments relate to the lady's
20 question earlier about practicing audiology and my
21 role and so forth. I'm currently retired, but the
22 point I'm making here is that the clinics were shut
23 down. At that point, I did not want to pay \$300,
24 which was the only requirement for continuing my

1 clinical audiology tonight. I'm here to testify to
2 issues related to the ear and sound, which I still
3 understand fairly well. So that would be my answer
4 I guess. Thank you for letting me respond.

5 CHAIRMAN CORNALE: Let me just ask the
6 question. You spoke of another governing body.

7 A. Yes.

8 CHAIRMAN CORNALE: Are you current with
9 them, the American Speech Language --

10 A. Thank you for asking. Yes, I forgot to
11 mention that I am current. I just finished my last
12 30 hours of -- most of it was online, I guess all of
13 it was online, but it's the way it is done or can be
14 done. And I'm current through '18, 2018.

15 CHAIRMAN CORNALE: Okay, very good. Thank
16 you. Mr. Blazer, you may continue.

17 MR. BLAZER: Thank you.

18 BY MR. BLAZER:

19 Q. To address your attorney's concern, you're
20 not licensed in Illinois either, correct?

21 A. No, I'm not.

22 Q. And are you aware that under the
23 provisions of the Illinois Speech Language Pathology
24 and Audiology Practice Act, an audiologist means a

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1 person who has received a license pursuant to that
 2 act and who engages in the practice of audiology?
 3 **A. I was not aware of that.**
 4 Q. All right.
 5 **A. I'm not surprised by that actually.**
 6 Q. And are you aware that under that act, the
 7 practice of audiology is the application of
 8 nonmedical methods and procedures?
 9 **A. I'm aware of that definition generally.**
 10 **I'm not, however, practicing audiology in the State**
 11 **of Illinois.**
 12 Q. All right. You know, there is a provision
 13 in the Michigan statutes that applies to, for
 14 example, audiologists who works -- who work with
 15 educational institutions, correct?
 16 **A. Sounds right, yes.**
 17 Q. All right. Exhibit 266. Exhibit 266 is
 18 Section 333.16807 of the same Michigan lic -- excuse
 19 me, licensing statute, and it says, if you look at
 20 subsection (a), "This part does not limit any of the
 21 following: an individual employed by a regionally
 22 accredited college or university --" and I assume
 23 MSU is regionally accredited, correct?
 24 **A. Correct.**

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1 Q. "-- and involved with research or the
 2 teaching of communication disorders --" and that's
 3 you, right?
 4 **A. Up until the time I retired, yes.**
 5 Q. Okay. "-- from performing those duties
 6 for which he or she is employed by that institution,
 7 as long as that individual does not engage in the
 8 practice of audiology or hold himself or herself out
 9 as licensed or otherwise authorized under this
 10 article as an audiologist." Did I read that
 11 correctly?
 12 **A. You read it correctly.**
 13 Q. All right. Let's talk about ASHA. And
 14 that's the American Speech-Language-Hearing
 15 Association, right?
 16 **A. Right.**
 17 Q. ASHA has a code of ethics, don't they?
 18 **A. Correct.**
 19 Q. Are you familiar with its provisions?
 20 **A. Yes, I've read them many times.**
 21 Q. All right. 268. Exhibit 268 is the ASHA
 22 Code of Ethics, correct?
 23 **A. Yes.**
 24 Q. All right. Principle of Ethics I, Rules

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1 of Ethics, page 2, subparagraph O. Tell me if
 2 I'm --
 3 **A. I'm sorry, say that again.**
 4 Q. Principle of Ethics I, Rules of Ethics, on
 5 page 2, subparagraph O.
 6 **A. Oh, okay.**
 7 Q. All right. "Individuals shall not charge
 8 for services not rendered, nor shall they
 9 misrepresent services rendered, products dispensed,
 10 or research and scholarly activities conducted."
 11 Are you familiar with that one?
 12 **A. Yes.**
 13 Q. All right. Page 3, Rules of Ethics,
 14 subparagraph A, "Individuals shall not misrepresent
 15 their credentials, competence, education, training,
 16 experience, or scholarly or research contributions."
 17 You're familiar with that one?
 18 **A. Yes, I'm familiar with all of this.**
 19 Q. Subparagraph D, "Individuals shall not
 20 misrepresent research, et cetera." Are you familiar
 21 with that one?
 22 **A. Yes.**
 23 Q. Subparagraph F?
 24 **A. I'm sorry, X?**

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1 Q. F, F as in Frank.
 2 **A. F.**
 3 Q. "Individuals' statement to the public
 4 shall provide accurate information about the nature
 5 and management of communication disorders, about the
 6 professions, about professional services, about
 7 products for sale, and about research and scholarly
 8 activities." Are you familiar with that one?
 9 **A. Yes.**
 10 Q. All right. Subparagraph G, "Individuals'
 11 statements to the public when advertising,
 12 announcing, and marketing their professional
 13 services; reporting research results; and promoting
 14 products shall adhere to professional standards and
 15 shall not contain misrepresentations." Did I read
 16 that one correctly?
 17 **A. Correct, yes.**
 18 Q. All right. Let's go to slide 3. And you
 19 say in here that you chaired a Wind and Health
 20 Technical Work Group, Michigan Department of Energy.
 21 **A. Yes.**
 22 Q. Now, this one kind of jumped out at me I
 23 will be honest with you. It seemed a little bit
 24 different from some of your other references. What

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1 did this involve?
 2 **A. I was asked to chair this work group, to**
 3 **chair this committee that was charged with the**
 4 **mission of coming up with a revision of the Michigan**
 5 **state guidelines for siting of onshore wind**
 6 **turbines.**
 7 Q. And the State of Michigan has statewide
 8 guidelines for the siting of wind turbines.
 9 **A. It had at the time, yes.**
 10 Q. Okay. So in that situation, you weren't
 11 hired by a wind opposition group, correct?
 12 **A. No, not at all.**
 13 Q. All right. And this was for the Michigan
 14 state government or some arm --
 15 **A. That's right.**
 16 Q. -- of the Michigan state government?
 17 **A. Excuse me, yes.**
 18 Q. That's going to happen a lot. Did you
 19 generate a report as result of that effort?
 20 **A. Well, the committee did. The work we did**
 21 **we generated -- we didn't generate -- if you want to**
 22 **know the full story, I mean I can tell you that, but**
 23 **we didn't generate a formal final report, but we**
 24 **generated about ten draft reports that were almost**

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1 **finalized.**
 2 Q. There was some sort of a document, a
 3 tail-end document that you generated?
 4 **A. Yes.**
 5 Q. And do you have your list of presentation
 6 references? I can't recall which exhibit number it
 7 is? UCLC Exhibit --
 8 **A. I have it somewhere here, yes.**
 9 Q. It might be easier for you on that one to
 10 use the computer because what I would really like
 11 you to do is I couldn't find that on your list of
 12 references. I was wondering if you could point it
 13 out to me.
 14 **A. I don't know that I included it. You're**
 15 **talking about -- let's see. No, it would have had**
 16 **the name Punch and Rosenman. We published a**
 17 **minority report -- we didn't publish, I'm sorry, we**
 18 **posted it through the university on the Internet.**
 19 Q. Okay. 269.
 20 **A. May I say I didn't include it because I**
 21 **didn't consider it research.**
 22 **MR. BLAKEMAN: 269?**
 23 **MR. BLAZER: 269.**
 24 **BY MR. BLAZER:**

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1 Q. I've handed you what's been marked as
 2 Pleasant Ridge Exhibit 269.
 3 **A. Okay.**
 4 Q. I think we can assume that's the one you
 5 posted on the web since, candidly, I'll tell you
 6 that's where I found it.
 7 **A. I didn't post this on the web.**
 8 Q. All right. Well, it does -- if you look
 9 at the -- the title of this is Recommended Update of
 10 Sample Zoning for Wind Energy Systems, correct?
 11 **A. Correct.**
 12 Q. Okay. And then if you look at the
 13 introduction, it identifies the individuals
 14 responsible for the update. Do you see that?
 15 **A. Yes, the third paragraph.**
 16 Q. All right. And it's William MacMillan,
 17 Jerry Punch, Professor of Audiology, Department of
 18 Communicative Sciences and Disorders, Michigan State
 19 University. That's you, right?
 20 **A. That's right.**
 21 Q. There isn't another one of those Jerry
 22 Punches in Michigan, correct?
 23 **A. Not that I know of.**
 24 Q. Okay. Could you take a look at page 2,

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1 limitations on noise? Do you see where I'm
 2 referring to?
 3 **A. Yes.**
 4 Q. All right. And the committee that you
 5 chaired says here, "We recommend that municipalities
 6 base their decisions about noise limitations on the
 7 best available, peer reviewed scientific evidence."
 8 First of all, what's the date of that document?
 9 **A. It seems to be dated June 28, 2011. I**
 10 **don't know what version this is. It might be the**
 11 **final; it might not be.**
 12 Q. Okay. Going back to what I was reading,
 13 as of June 28, 2011, "There is sufficient evidence
 14 to support a link between audible sound produced by
 15 wind turbines and both sleep disturbance and
 16 annoyance. Regarding infrasound, however, we
 17 believe that a causal link between infrasound and
 18 adverse health impacts is not established despite
 19 numerous anecdotal accounts and a growing literature
 20 showing the biological plausibility of such a link.
 21 It is also important to recognize that there is no
 22 published peer reviewed literature showing the
 23 absence of a link. This issue should be
 24 periodically revisited by interdisciplinary experts

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1 as future peer review evidence becomes available."
 2 Did I read that correctly?
 3 **A. You did.**
 4 Q. All right. Could you -- back to your
 5 slide 3. And I'll just read it to you. You don't
 6 have to dig for it. Under your recent professional
 7 experience, you list ongoing literature review.
 8 **A. Yes.**
 9 Q. All right. And I think you said when you
 10 -- in your opening comments today, that that's
 11 something you do. Over the last two years, you've
 12 read a bunch of articles --
 13 **A. Continue.**
 14 Q. -- and you continue to keep yourself
 15 abreast of materials that become available in the
 16 context of wind projects and you're interested in
 17 wind projects, correct?
 18 **A. Correct.**
 19 Q. Let's go to your slide 16. And this is
 20 the one entitled Noise Annoyance and Health,
 21 Opposing Views.
 22 **A. Yes.**
 23 Q. And you talk about the -- what the wind
 24 industry, you say, concedes, but states that

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1 annoyance is not a pathological entity, i.e.,
 2 annoyance and health are different entities. Do you
 3 see that?
 4 **A. Concedes wind turbine noise is annoying.**
 5 Q. Right.
 6 **A. Yes.**
 7 Q. Do you consider materials generated by the
 8 wind industry on these issues to be inherently
 9 biased?
 10 **A. It's a very difficult question.**
 11 Q. That's why I asked it.
 12 **A. Yes, I think most times when panels are**
 13 **appointed, they're appointed -- they're appointing**
 14 **selected people who are known to be advocates for**
 15 **the wind industry. And in no case that I recall has**
 16 **any state in which those panels have been appointed**
 17 **by the wind industry included anyone like myself or**
 18 **any other person who does not advocate for the wind**
 19 **industry in that same sense.**
 20 Q. So is your answer to my question yes?
 21 **A. I think it's yes.**
 22 Q. Okay. Go to slide 13. Preliminary
 23 thoughts, perspectives/biases. And this is the one
 24 we touched on very briefly a few minutes ago. This

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1 is the one where you did the pro, the anti, and the
 2 pro-health, right?
 3 **A. Right.**
 4 Q. So you're really -- the first two, you're
 5 talking about both sides of the spectrum. There's
 6 the pro-wind and there's the anti-wind. And both
 7 sides have their biases, right?
 8 **A. Right.**
 9 Q. Okay. And that's the point you're trying
 10 to make on this slide, right?
 11 **A. Yeah, I'm trying to make the major point**
 12 **that there's another view. I think some folks in**
 13 **other counties in Illinois call it**
 14 **pro-responsibility.**
 15 Q. Right. Well, talking about the pro-wind
 16 groups and the anti-wind groups, following up on
 17 your answer that studies generated by the pro-wind
 18 groups appear to have inherent bias, would you also
 19 agree that materials generated by members of the
 20 opposing groups, the ones you identify in your slide
 21 13, would also reflect some inherent bias?
 22 **A. Some bias, yes.**
 23 Q. Okay. So here's what I'd like to do if
 24 you'll bear with me. I'm going to try and go

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1 through some materials with you that have come out
 2 since that report, 269, in the State of Michigan,
 3 but I'm going to try and separate out materials --
 4 I'm going to try and get to your third option, the
 5 pro-health option.
 6 **A. Okay.**
 7 Q. So I'm going to try and separate out
 8 materials generated by authors who under your
 9 criteria may have a bias and just focus on those
 10 that appear to be wholly independent, like, for
 11 example, what you did for the State of Michigan.
 12 Does that sound fair?
 13 **A. If you wish, yes.**
 14 Q. Okay. So I'm going to exclude out
 15 anything that's been published, for example, by the
 16 American Wind Energy Association or the Canada Wind
 17 Energy Association. Those are clearly pro-wind
 18 groups, right?
 19 **A. Right.**
 20 Q. Okay. I also want to exclude out things
 21 that are published by persons or entities that are
 22 tied to anti-wind groups, like National Wind Watcher
 23 or Illinois Wind Watch. Does that sound fair?
 24 **A. I think it's fair, judging from where I**

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1 **believe you sit, yes.**
 2 Q. Okay. And you do know that those others
 3 are anti-wind groups, right?
 4 **A. I do.**
 5 Q. Okay.
 6 **A. Yes, and I make sure I don't belong to any**
 7 **of them.**
 8 Q. Right. 282. 282, Tom. What I've shown
 9 you here is a list of wind opposition groups from
 10 the National Wind Watch website. You're certainly
 11 familiar with a few of those groups, aren't you?
 12 **A. Certainly some of them, yes.**
 13 Q. Okay.
 14 **A. I wasn't aware there was so many actually.**
 15 Q. Yeah, right. The production --
 16 **MR. BLAKEMAN:** Excuse me, I'm not finding
 17 282.
 18 **MR. BLAZER:** 282.
 19 **MR. BLAKEMAN:** What's the cover sheet look
 20 like? Okay, here it is.
 21 **CHAIRMAN CORNALE:** We've got it.
 22 **BY MR. BLAZER:**
 23 Q. One other organization. You're familiar
 24 with something called the Society for Wind

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1 Vigilance?
 2 **A. I am. I think it's about 15 members.**
 3 Q. Okay. You're not a member of it, are you?
 4 **A. I'm not.**
 5 Q. Okay. That's not a pro-wind group, is it?
 6 **A. I would say not.**
 7 Q. Okay. 273.
 8 **MR. BLAZER:** 273, counsel.
 9 Q. I'll represent to you, sir, that 273 is a
 10 printout from the website of the Society for Wind
 11 Vigilance. And in going through that, it looked
 12 very similar to some of the material that you
 13 presented here last night. For example, that graph
 14 on the first page.
 15 **A. Okay.**
 16 Q. Would you -- I mean, that's the same graph
 17 you presented here.
 18 **A. Yeah, it's from a peer reviewed journal.**
 19 Q. Okay. So the material that you presented
 20 yesterday, did you get that from the Society for
 21 Wind Vigilance site?
 22 **A. No, absolutely not. I don't go there.**
 23 Q. Okay. 274. 274, Dr. Punch, is a list of
 24 the directors and the advisors that are affiliated

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1 with the Society for Wind Vigilance, correct?
 2 **A. It's a list of -- I don't know if it's**
 3 **correct or not, but --**
 4 Q. Well, it's off their website.
 5 **A. It's off -- okay.**
 6 Q. That's actually not my question. My
 7 question is do you see any names on here that you
 8 recognize?
 9 **A. I do, sure.**
 10 Q. Could you identify which ones that you're
 11 personally familiar with?
 12 **A. With them personally as professionals or**
 13 **people --**
 14 Q. Sure.
 15 **A. -- or with their articles or --**
 16 Q. Well, for example --
 17 **A. I don't know everybody personally by any**
 18 **means.**
 19 Q. I understand.
 20 **A. I know very few of them, if any,**
 21 **personally.**
 22 Q. For example, Rick James is on there.
 23 **A. I know Rick James personally --**
 24 Q. Right.

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1 **A. -- yes.**
 2 Q. There's a Dr. Nissenbaum on there.
 3 **A. Yes.**
 4 Q. Do you know him personally?
 5 **A. Michael Nissenbaum. I talked to him once**
 6 **on the phone.**
 7 Q. Okay.
 8 **A. Don't know him that well personally.**
 9 Q. I think there's a Dr. Shepherd listed on
 10 there. Do you know him personally?
 11 **A. No.**
 12 Q. Okay.
 13 **A. I have quoted him though. Does do**
 14 **research.**
 15 Q. Yes, you do.
 16 **A. Valid research.**
 17 **MR. BLAZER:** I'm sorry, which one are
 18 you --
 19 **MR. BLAKEMAN:** 274.
 20 **MR. BLAZER:** Did you find it?
 21 **MR. BLAKEMAN:** Yes.
 22 **CHAIRMAN CORNALE:** Yes.
 23 **BY MR. BLAZER:**
 24 Q. All right, let's go back to your

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1 presentation. You refer to just a couple of our
 2 exhibits in your presentation and we'll get to those
 3 shortly. Could you describe generally the extent of
 4 your review of this record that you conducted?
 5 **A. Records meaning my review of literature**
 6 **and journals?**
 7 Q. No, no, of this proceeding. What did
 8 you --
 9 **A. Oh, okay, I got you. Yeah, I -- I**
 10 **reviewed some parts of the application just to get a**
 11 **general view of what was going on, what was being**
 12 **asked, after which I reviewed the, quote, unquote,**
 13 **depositions of -- if they're depositions. I'm not**
 14 **sure whether --**
 15 Q. You mean their testimony?
 16 **A. Testimony, yeah, of Drs. Roberts and Dr.**
 17 **-- Drs. Roberts and Ellenbogen. I believe that was**
 18 **it.**
 19 Q. Okay. Did you review all of the materials
 20 that were put into the record by Dr. Roberts?
 21 **A. No, I reviewed his presentation and a**
 22 **sample of some of the exhibits I believe.**
 23 Q. All right. Let's go back, then, to slide
 24 16 of your presentation, and this is the one we

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1 looked at before where you say the wind industry
 2 concedes that wind turbine noise is annoying,
 3 including its fluctuating nature, but states that
 4 annoyance is not a pathological entity. That slide.
 5 Do you know where I'm referring to?
 6 **A. I have it, yes.**
 7 Q. You do know it's not just the wind
 8 industry that takes that medical position, correct?
 9 **A. Yes, I do. There are others who say the**
 10 **same thing.**
 11 Q. All right. Now, yesterday you said that
 12 you relied for most of your opinions on peer
 13 reviewed literature and other sources including
 14 government reports, correct?
 15 **A. I think I said that, yes.**
 16 Q. Okay. So what I'm going to ask you -- and
 17 I'm going to hand you these. I'll go through them.
 18 These are not new exhibits; these are already in the
 19 record. So I'm going to ask you for each one of
 20 these if you think any of these are part of the wind
 21 industry or otherwise biased.
 22 **A. Look through them now or --**
 23 Q. Well, one at a time. I'll identify them
 24 and you take a look and you tell me. That's the

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1 question I want to ask you.
 2 **A. Sure.**
 3 Q. Pleasant Ridge Exhibit 67 issued by the
 4 Springfield, Sangamon County, Illinois Regional
 5 Planning Commission in 2012. Is that a --
 6 **A. 67?**
 7 Q. 57.
 8 **A. Oh, right on top.**
 9 Q. 57. They're in order. Is that entity
 10 part of the wind industry?
 11 **A. I'm looking for an author and I don't see**
 12 **one.**
 13 Q. The author --
 14 **A. It's hard to tell where it's from.**
 15 Q. The author -- well, it's from, right in
 16 front, the Springfield, Sangamon County, Regional
 17 Planning Commission.
 18 **A. Okay.**
 19 Q. Is that part of the wind industry?
 20 **A. Not from the wind industry if you define**
 21 **it as AWEA I think.**
 22 Q. Is the Springfield, Sangamon County,
 23 Regional Planning Commission a wind entity of any
 24 kind?

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1 **A. You're asking me? I don't know.**
 2 Q. You don't know. So you don't know if that
 3 agency is inherently biased in the favor of wind --
 4 **A. No, I don't know.**
 5 Q. All right, let's look at No. 58. That's a
 6 2012 report issued by the State of Maine Department
 7 of Health and Human Services. Is that entity part
 8 of the wind industry?
 9 **A. From the Department of Health and Human**
 10 **Services and looks like Maine, yes. I would view**
 11 **these, this report and some others like it, as --**
 12 Q. Please, you know, this is going to go a
 13 lot faster --
 14 **A. Okay, all right.**
 15 Q. -- if you just answer my question. My
 16 question is --
 17 **A. You want yes or no as part of the wind**
 18 **industry?**
 19 Q. Is the Maine Department of Health and
 20 Human Services part of the wind industry?
 21 **A. I would think there's a connection.**
 22 Q. Why would you think there's a connection
 23 between a state department of health --
 24 **A. Oh, no. Okay, you're right, you're right.**

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1 **Okay, no, I don't see a connection.**
 2 Q. All right.
 3 **A. Okay.**
 4 Q. And so is it your opinion, if you know, is
 5 a report issued by the State of Maine Department of
 6 Health and Human Services inherently biased in favor
 7 of the wind industry?
 8 **A. In this report you're saying? I don't**
 9 **think -- I don't think it's inherently biased in**
 10 **terms of the wind industry, no.**
 11 Q. Let's look at the next one, Exhibit 59.
 12 And that was a report issued in 2012 on behalf of
 13 the Massachusetts Department of Environmental
 14 Protection and the Massachusetts Department of
 15 Health. Are those two state agencies part of the
 16 wind industry?
 17 **A. No, but you're connecting this to a**
 18 **statement I made to examples --**
 19 Q. I'm not connecting it to anything, sir.
 20 **MR. LUETKEHANS:** You know --
 21 Q. I'm just asking you a question.
 22 **MR. LUETKEHANS:** -- can he finish the
 23 answer please? I think he's in the middle of his
 24 answer and he got cut off.

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1 **CHAIRMAN CORNALE:** Mr. Punch, go ahead and
 2 finish your answer.
 3 **A. Short answer. I was looking at two**
 4 **diametrically opposed positions without putting any**
 5 **of these in any particular place, okay?**
 6 Q. My questions are putting them in that
 7 particular place.
 8 **A. Okay, okay.**
 9 Q. All right, so I'll ask it again. Are the
 10 Massachusetts Department of Environmental Protection
 11 or the Massachusetts Department of Health part of
 12 the wind industry?
 13 **A. Not a governmentally-related tie-in. I'll**
 14 **say no.**
 15 Q. And is a report issued by those agencies
 16 inherently biased in favor of the wind industry?
 17 **A. I -- I don't know. Some of these other**
 18 **people -- Dr. Ellenbogen certainly has testified on**
 19 **behalf of the wind industry many times in many**
 20 **places.**
 21 Q. Dr. Ellenbogen has testified on behalf of
 22 the wind industry many times in many places?
 23 **A. I think he has.**
 24 Q. Really? What do you base that on?

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1 **A. Well --**
 2 Q. What do you base that on?
 3 **A. It's my understanding that he has -- I**
 4 **know he participated in this one.**
 5 Q. You said many times in many places. What
 6 do you base that on?
 7 **A. I don't have -- okay, I don't know what**
 8 **states. I understood he was testifying in a number**
 9 **of states. I do --**
 10 Q. Who told you that?
 11 **MR. LUETKEHANS:** Can he finish --
 12 **A. I don't know, I don't know.**
 13 **MR. LUETKEHANS:** -- before you cut him off
 14 and --
 15 **A. I don't know.**
 16 **MR. LUETKEHANS:** You know what, she's got
 17 no chance here.
 18 **CHAIRMAN CORNALE:** Okay, all right.
 19 **MR. LUETKEHANS:** Mr. Blazer, I would just
 20 ask that you wait for him to finish his answer.
 21 **CHAIRMAN CORNALE:** We do need to let him
 22 finish. But remember, you need to answer the
 23 question that Mr. Blazer poses without extrapolating
 24 other things --

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1 **A. Right, all right.**
 2 **CHAIRMAN CORNALE:** -- that potentially
 3 lead down to --
 4 **A. Okay, no.**
 5 **CHAIRMAN CORNALE:** -- questions that never
 6 end.
 7 **A. I don't have any definite factual**
 8 **information. My impression was based on information**
 9 **from sources I don't recall, but it's not worthy of**
 10 **discussion here I don't think in terms --**
 11 **BY MR. BLAZER:**
 12 Q. Oh, I think it's very worthy of
 13 discussion.
 14 **A. Well --**
 15 Q. So let me try it --
 16 **MR. LUETKEHANS:** Is that a question?
 17 Q. Let me try it this way. Do you have any
 18 information to suggest, imply or confirm that Dr.
 19 Ellenbogen has ever in his entire career testified
 20 in any proceeding other than his testimony in this
 21 proceeding?
 22 **A. No, I don't.**
 23 Q. So you were speculating?
 24 **A. I guess. I understood he had. I even**

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1 **took a course under him to see what he was saying**
 2 **about sleep --**
 3 Q. All right.
 4 **A. -- because I thought that.**
 5 Q. Let's look at the next one. You thought
 6 -- you took a course under him because you thought
 7 what?
 8 **A. I took an online course because I knew he**
 9 **was testifying here and I thought in another place**
 10 **or more on behalf of the wind industry about sleep**
 11 **and I was interested in seeing what he said about**
 12 **sleep. He taught a course to audiologists.**
 13 Q. So you tried to check him out.
 14 **A. I -- I was impressed with him, okay?**
 15 Q. He's an impressive guy, isn't he?
 16 **A. He's an impressive guy.**
 17 Q. All right, let's go to the next one.
 18 Pleasant Ridge Exhibit 60. Is the Public Health
 19 Division of the Oregon Health Authority associated
 20 with the wind industry?
 21 **A. Not that I know of.**
 22 Q. And would a report issued by that agency
 23 be inherently biased in favor of the wind industry?
 24 **A. I didn't say it was, no.**

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1 Q. That's not my question.
 2 **A. No, I don't guess it is.**
 3 Q. All right. Pleasant Ridge Exhibit 61,
 4 that's a report by the University of Salford,
 5 S-A-L-F-O-R-D, prepared for the Scottish government.
 6 Is the Scottish government part of the wind
 7 industry?
 8 **A. I'm sure there are ties between the two,**
 9 **but as far as I know, I would think the government**
 10 **has regulatory say in the wind industry and what it**
 11 **does. I'm just assuming again. I don't know. Not**
 12 **that I know of, okay?**
 13 Q. I assume your basis for assuming that
 14 connection is the same basis you had for assuming
 15 that Dr. Ellenbogen has testified in multiple --
 16 **A. No, same basis for assuming that the wind**
 17 **industry and governmental ties are pretty strong in**
 18 **terms of production tax credits, et cetera.**
 19 Q. Are there production tax credits in
 20 Scotland?
 21 **A. I don't think so.**
 22 Q. All right.
 23 **CHAIRMAN CORNALE:** Okay, you guys, this is
 24 a perfect opportunity to take ten minutes. I've got

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1 7:45, so let's try to resume at 7:55. Thank you.
 2 (Recess at 7:45 p.m. to 7:55 p.m.)
 3 **CHAIRMAN CORNALE:** All right, if we can go
 4 ahead and start heading back. All right, Mr.
 5 Blazer, I think you were in the middle of some
 6 questions. We'll let you go ahead and continue
 7 along and --
 8 **MR. BLAZER:** Oh, I wish it was the middle.
 9 **BY MR. BLAZER:**
 10 Q. All right. You've got a couple more up
 11 there. I'll make it quick on those two. You've got
 12 Pleasant Ridge Exhibit 62 which is a document from
 13 the Australian Medical Association and then 64 is
 14 the Wisconsin Wind Siting Council. Do you see those
 15 two?
 16 **A. Yes. And there's a 63 here too.**
 17 Q. Oh, Health Canada, all right. We'll be
 18 talking about Health Canada. Actually 62, 63 and
 19 64, those three entities, those are not entities
 20 associated with the wind industry, correct?
 21 **A. Not in a direct way that I know of, no.**
 22 Q. Okay. You have -- you have Exhibit 64
 23 there, the one from the Wisconsin Wind Siting
 24 Council?

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1 **A. I do.**
 2 Q. That one is dated October 31, 2014. If
 3 you can turn to page 3. You can take the clip off
 4 if that's easier.
 5 **A. Okay.**
 6 Q. And then there's a couple of bullet points
 7 that I'm going to ask you a question about. The
 8 first one is, "There are substantial individual
 9 differences in how people report their perception of
 10 wind energy systems and a negative perception
 11 affects whether an individual reports adverse health
 12 effects that they attribute to wind energy systems."
 13 Then the next one says, "The majority of
 14 individuals living near utility-scale wind systems
 15 do not report stress, sleep deprivation or chronic
 16 adverse health effects attributed to wind turbines."
 17 On that latter bullet point, I believe you
 18 testified yesterday that you agree with that one,
 19 right, the majority of people do not submit
 20 complaints, correct?
 21 **A. I think that's true, they do not submit or**
 22 **report complaints.**
 23 Q. Okay. Could you go to page 15, the first
 24 paragraph of that same Wisconsin Wind Siting Council

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1 document.
 2 **A. Okay.**
 3 Q. It's the paragraph that starts "As noted
 4 previously." Do you see it?
 5 **A. At the top, yes.**
 6 Q. All right. It says, "As noted previously,
 7 in no instance in the council's literature survey
 8 did an article make the claim that wind turbines
 9 have no effect on individuals living near them.
 10 Rather, the view of those authors in the relatively
 11 pro-wind category is that they can cause annoyance,
 12 may cause sleep disturbance, and may cause some
 13 stress due to environmental noise and a loss of
 14 control over the environment. Although these
 15 effects may be viewed by some as adverse health
 16 effects, another group of articles concludes that
 17 there is not a direct link between wind turbines and
 18 negative effects in human health and that wind
 19 turbines do not elicit more complaints of adverse
 20 health effects than other types of novel
 21 environmental noise."
 22 So far, it looks like they're saying
 23 roughly what you said here, correct?
 24 **A. Pretty consistent, yes.**

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1 Q. All right. "Furthermore, these articles
 2 indicate that the primary predictor of whether an
 3 individual will report adverse health effects
 4 subsequent to a wind energy facility coming online
 5 is the individual's perceptions of wind turbines.
 6 In other words, these authors argue that an
 7 individual's disposition, positive or negative,
 8 towards wind turbines is a powerful predictor of
 9 whether they will report adverse health effects."
 10 And that's one of those conclusions that
 11 you disagree with, correct?
 12 **A. Yes, I do.**
 13 Q. Okay. But isn't that consistent with the
 14 report --
 15 **A. May I correct that response? I don't**
 16 **disagree that that was what they said. I**
 17 **disagree --**
 18 Q. You don't agree with the conclusion.
 19 **A. -- the authors --**
 20 Q. Now I did it to you, I apologize.
 21 **A. Okay. I don't believe overall that, based**
 22 **on at least the four studies I talked about last**
 23 **night in the slide presentation, that personality**
 24 **effects account alone for negative attitudes towards**

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1 **wind turbines and -- I'm sorry, not negative,**
 2 **account for adverse health effects, reports of those**
 3 **effects.**
 4 Q. Let's talk about annoyance which is one of
 5 the things that they talked about.
 6 **A. Okay.**
 7 Q. In the context of annoyance, isn't that
 8 conclusion similar to the conclusion that the group
 9 you chaired in Michigan came to?
 10 **A. You're giving me a report in 2011. A lot**
 11 **has happened since then.**
 12 Q. Well, let's look at that report in 2011.
 13 **A. Okay.**
 14 Q. Let's go back to Exhibit 269.
 15 **A. That was in this stack, right?**
 16 Q. It's one of the ones I gave you earlier.
 17 **A. All right, I have it.**
 18 Q. Okay, page 4. It's the paragraph that
 19 starts "Conclusions that can be derived." Do you
 20 see it?
 21 **A. Yes.**
 22 Q. Okay. And the committee that you chaired
 23 in June of 2011 said, "Conclusions that can be
 24 derived from these data are that individuals who do

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1 not benefit economically from wind turbines are more
 2 likely to be annoyed by noise at relatively low
 3 levels and that the level of annoyance increases
 4 with increasing noise levels. The latter finding
 5 was also supported by Pedersen and Persson,
 6 P-E-R-S-S-O-N, Wayne, W-A-Y-E, 2004. Communities
 7 that are tolerant of these levels of annoyance may
 8 wish to adopt 45 dB(A) as the maximum allowable
 9 noise level, but in our view, nonparticipating
 10 residents are more likely to have complaints about
 11 noise levels when an outdoor noise level -- excuse
 12 me, when outdoor noise levels reach or exceed 45
 13 dB(A)." Did I read that correctly, sir?
 14 **A. You read it correctly.**
 15 Q. All right.
 16 **A. Yes.**
 17 Q. Could you go back to Exhibit 64? That's
 18 the Wisconsin Wind Siting Council report.
 19 **A. Sorry.**
 20 Q. I'll wait until you get --
 21 **A. I'm a little bit covered up here.**
 22 Q. Want me to try and find it for you?
 23 **A. Must be this one.**
 24 Q. The Wisconsin Wind Siting Council. It's

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1 Exhibit 64.
 2 **A. I have it.**
 3 Q. All right. Page 16.
 4 **A. 60?**
 5 Q. 1-6.
 6 **A. Okay. All right.**
 7 Q. And the majority conclusion is, "Although
 8 important and indeed groundbreaking research is
 9 clearly being conducted in the field of wind-health
 10 interactions, this council is unable at this time to
 11 conclude that wind turbines have a direct and
 12 negative effect on human health." Did I read that
 13 correctly?
 14 **A. Yes.**
 15 Q. All right. Go to your slide 14.
 16 **A. Okay.**
 17 Q. Now, Exhibit 64, this Wisconsin Wind
 18 Siting Council report, evidently is one of the
 19 documents that we put in evidence that you did
 20 review before you came here; is that right?
 21 **A. I reviewed it to some extent of course.**
 22 Q. Okay, and that's because on this slide,
 23 you're highlighting a statement from a minority
 24 report that's attached to that majority report,

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1 correct?
 2 **A. Correct.**
 3 Q. All right. Could you turn to Appendix E,
 4 page 1 --
 5 **A. Of the Wisconsin?**
 6 Q. -- of the Wisconsin report. Appendix E.
 7 **A. Appendix I or what?**
 8 Q. E.
 9 **A. E, okay. What page does it come after?**
 10 Q. I'll find it for you. I'm just going to
 11 read the conclusion. It's going to be easier.
 12 Rather than digging for this, Dr. Punch, I'll just
 13 read you what it says.
 14 **A. Sure.**
 15 Q. This is from the minority report at the
 16 beginning. It's Appendix E, page 1. And this is
 17 what they say about the majority's principal
 18 conclusion. "We find that the council has done an
 19 excellent job in keeping with these obligations of
 20 reviewing the available peer reviewed research
 21 regarding the potential for direct negative health
 22 impacts of large wind energy systems to residents
 23 living near those systems. We further believe that
 24 the assessment and overall conclusion of the Wind

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1 Siting Council based on that review is sound, namely
 2 the finding that:
 3 Although there are several publications
 4 arguing that noise from wind turbines directly
 5 causes adverse health effects in humans, based upon
 6 the peer reviewed literature, it appears at this
 7 time that there is insufficient data to validate
 8 this scientific conclusion."
 9 Now, with the understanding that that's
 10 what they said, my question is when you prepared
 11 your slides and you put what you did on your slide
 12 14, why didn't you include what I just read?
 13 **A. I didn't actually see it at the time. I**
 14 **had seen the report before, but I was trying to make**
 15 **the simple point that I agree with these two**
 16 **opinions, even though they came from different**
 17 **groups or subgroups of that larger group.**
 18 Q. You do know that there are 15 members of
 19 the Wisconsin Wind Siting Council, don't you?
 20 **A. I didn't know the exact number, no.**
 21 Q. It's at the top of page 5.
 22 **A. Okay, I didn't see it.**
 23 Q. Okay. And going back to the majority
 24 report, and those are -- hopefully you can find it

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1 there, but I'll read it to you. I've got the quote
 2 here. Let's make it easier. It's at the bottom of
 3 page 15.
 4 "The council's survey of review and
 5 opinion articles identified more articles that were
 6 critical of wind energy systems than in support (15
 7 critical, 7 supportive). This does not indicate
 8 that the consensus of the scientific community is
 9 that wind energy facilities have proven adverse
 10 health effects in humans however. Although the
 11 reviews and opinion articles that are not critical
 12 of wind energy are fewer in number, other factors
 13 are also important when evaluating these articles.
 14 For instance, many of the critical reviews and
 15 opinion articles are published in very low-impact
 16 journals, make erroneous claims, and do not follow
 17 scientific standards on citing evidence."
 18 Do you know if that assessment includes
 19 Nina Pierpont?
 20 **A. I imagine it did, but I don't know.**
 21 Q. Okay. In --
 22 **A. Although, I'm sorry, hers is not a review**
 23 **though, it's a book reporting case studies, so maybe**
 24 **not on that basis.**

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1 Q. All right. In several of your slides --
 2 and you don't have to just go through them because
 3 I'm going to mention them in a minute -- 17, 18 and
 4 19, you cite the work of a person named, we just
 5 mentioned her, Wayne, W-A-Y-E; is that correct?
 6 **A. That's correct.**
 7 Q. She is usually coauthoring articles with
 8 Pedersen?
 9 **A. She has several, yes, with Pedersen.**
 10 Q. Right. And that's Kerstin, K-E-R-S-T-I-N,
 11 Kerstin Wayne, correct?
 12 **A. Yes. I mistakenly -- in this Michigan**
 13 **report, I mistakenly put Kerstin-Wayne as her last**
 14 **name. I think her last name is just Wayne.**
 15 Q. Correct. Do you consider her an
 16 authoritative source since you cited her so many
 17 times?
 18 **A. Yeah, in terms of what they did, I think**
 19 **it's valid. I think they view the issue of the**
 20 **annoyance different than we do.**
 21 Q. Let's go back to just one last thing from
 22 the Wisconsin Wind Siting Council report from
 23 October of last year. This is page 16, the last
 24 paragraph. Again, don't dig. I'll just read it to

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1 you. It's easier.
 2 "As it stands, the literature available to
 3 the council lacked strength and in some instances
 4 was biased. Many of the authors of the materials
 5 cited herein point this out and call for more
 6 detailed, randomized, long-term studies in the
 7 future. The council is aware of at least one study
 8 being conducted by a government panel that is
 9 designed to do just that and at least one additional
 10 governmental review of the literature. These may
 11 shed light on new health issues associated with wind
 12 turbines or confirm the council's finding that there
 13 is no direct link between wind turbines and human
 14 health. At the very least, ongoing research should
 15 clarify the sometimes muddy waters of the
 16 wind-health debate."
 17 Do you have some recollection of having
 18 read that?
 19 **A. I've read that --**
 20 Q. Okay.
 21 **A. -- several times in many places, several**
 22 **places.**
 23 Q. And the two studies that they referred to,
 24 footnotes 65 and 66 on that page, are the Government

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1 of Canada, Health Canada and Statistics Canada
 2 Group, and Government of Australia, National Health
 3 and Medical Research Council. Do you remember that?
 4 **A. Not specifically Medical Research Council,**
 5 **but I think I must have read it at some point.**
 6 Q. You'll take my word for it --
 7 **A. I will.**
 8 Q. -- that that is footnote 66? Okay. Let's
 9 go to Health Canada, which you have up there. It's
 10 Pleasant Ridge Exhibit 63. And you say on slide 21,
 11 Exhibit 63, Health Canada 2014, quote, WTN -- which
 12 that's wind turbine noise, right?
 13 **A. Right.**
 14 Q. "WTN annoyance was found to be
 15 statistically related to measured long-term cortisol
 16 levels and systolic and diastolic blood pressure."
 17 That's on your slide 21, right?
 18 **A. Right.**
 19 Q. Okay. And that's what you quoted out of
 20 the Health Canada report, right?
 21 **A. Yes, under the title Annoyance, Stress and**
 22 **AHEs.**
 23 Q. Right, okay. And remember last night when
 24 you were talking about this, you characterized this

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1 quote that you quoted in your slide as an admission?
 2 Do you remember saying that?
 3 **A. I don't know what you mean by admission.**
 4 Q. Okay, I'll read you your testimony. Maybe
 5 it will refresh your recollection.
 6 **A. Okay.**
 7 **MR. BLAZER:** Phil -- excuse me, Mr.
 8 Luetkehans, it's page 1364, line -- starts at line
 9 17.
 10 Q. "The Health Canada study admitted or said
 11 that wind turbine noise, they abbreviated it WTN,
 12 annoyance was statistically related to measured
 13 long-term cortisol levels and systolic and diastolic
 14 blood pressure. So they had some physiologic
 15 studies that they reviewed and they basically are
 16 saying that, yeah, annoyance does relate, in fact,
 17 to health problems. That's the Health Canada study
 18 which is being purported to be a very much pro-wind
 19 type of study."
 20 Do you remember testifying to that last
 21 night?
 22 **A. Pretty much, yes.**
 23 Q. Okay. So first, since you have the Health
 24 Canada study there, this quote that's in your slide

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1 21, what section of the Health Canada study is that
 2 from?
 3 **A. Well --**
 4 Q. You have to go all the way back to page 2
 5 to see where the section starts. It's Section B.
 6 What does that say?
 7 **A. Self-reported questionnaire results.**
 8 Q. All right. And you do know that's not the
 9 principal conclusion of the study, don't you?
 10 **A. No, I took a -- I selected this to make a**
 11 **point that even your own exhibits indicate there is**
 12 **a relationship between physiological measures and**
 13 **wind turbine noise.**
 14 Q. All right. Well, why don't we see what
 15 those people said about the line you quoted. It's
 16 at the top of page 3.
 17 **A. Are you saying the quote is not in here?**
 18 Q. I'm not saying that.
 19 **A. I can't find it at the moment. I'm just**
 20 **asking if you could show me where it is again. I**
 21 **found it earlier obviously.**
 22 Q. Your quote?
 23 **A. Yeah.**
 24 Q. Sure.

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1 **A. I don't know where I got it exactly from.**
 2 **I know I read it and took the quote from here, but**
 3 **I --**
 4 Q. Here, I'll find it for you.
 5 **CHAIRMAN CORNALE:** Mr. Punch, just to
 6 remind you, too, if you can speak a little closer to
 7 the mic. I know we're struggling a little bit to
 8 hear you.
 9 **A. I'm sorry.**
 10 **CHAIRMAN CORNALE:** No problem. All right,
 11 if you see the court reporter leaning towards you,
 12 that's because she's having a hard time hearing you.
 13 **A. Thank you.**
 14 **BY MR. BLAZER:**
 15 Q. For the record, Mr. Punch -- Dr. Punch,
 16 it's 5.3 and it's the second bullet.
 17 **A. Gotcha, thank you.**
 18 Q. Okay. That's the one you elected to quote
 19 for the zoning board, correct?
 20 **A. Yes.**
 21 Q. Okay. Now, could you go to the top of
 22 page 3 of the report? And here's what Health Canada
 23 said about the part that you quoted from the
 24 questionnaires.

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1 **MR. LUETKEHANS:** Is that a question or a
 2 statement?
 3 **MR. BLAZER:** No, I'm reading it to him --
 4 **MR. LUETKEHANS:** Well --
 5 **MR. BLAZER:** -- and I'm going to ask him a
 6 question.
 7 **MR. LUETKEHANS:** -- I guess I'm going to
 8 object to the characterization.
 9 **MR. BLAZER:** All right. Well, I'm just
 10 going to read from the report.
 11 **MR. LUETKEHANS:** Okay.
 12 **BY MR. BLAZER:**
 13 Q. The following -- first of all, are you at
 14 the top of the page on page 3?
 15 **A. Yes.**
 16 Q. Okay. The following were not found to be
 17 associated with WTN exposure: self-reported sleep,
 18 e.g., general disturbance, use of sleep medication,
 19 diagnosed sleep disorders; self-reported illnesses,
 20 e.g., general disturbance, use of sleep
 21 medication -- excuse me, I just reread the same one,
 22 didn't I?
 23 Self-reported illnesses, e.g., dizziness,
 24 tinnitus, prevalence of frequent migraines and

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1 headaches, and chronic health conditions, e.g.,
 2 health disease, high blood pressure and diabetes;
 3 and self-reported perceived stress and quality of
 4 life. While some individuals reported some of the
 5 health conditions above, the prevalence was not
 6 found to change in relation to WTN levels.
 7 Now, was it your decision to quote a
 8 portion of this report that the study rejected or
 9 did somebody ask you to do that?
 10 **A. Nobody asked me.**
 11 **MR. LUETKEHANS:** Objection to
 12 characterization, argumentative.
 13 Q. It is true, isn't it, before this study
 14 came out that you had been looking forward to the
 15 results; isn't that right?
 16 **A. May I ask where you heard that?**
 17 Q. From your testimony --
 18 **A. I was looking forward?**
 19 Q. -- in a prior proceeding.
 20 **A. No, I don't --**
 21 Q. Well --
 22 **A. If I said that in my testimony, I was**
 23 **probably incorrect. I don't remember looking**
 24 **forward to it. It came out unexpectedly some weeks**

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1 **ago.**
 2 Q. Unexpectedly?
 3 **A. Well, in my word. I knew they were doing**
 4 **a study, okay? I didn't know when it was about to**
 5 **come out, and it came out unannounced to me and**
 6 **others I guess, and I was a little surprised, but**
 7 **that's a quote.**
 8 Q. Well, you did know before it came out that
 9 the Canada budget -- the Canada government had
 10 budgeted \$1.8 million for the study, right?
 11 **A. Yes.**
 12 Q. Okay. And you felt that that was --
 13 before the study came out, you felt that that was an
 14 indication that the medical community considers the
 15 complaints from Ontario and other provinces as
 16 credible and that it wants to gain a better
 17 understanding of the problem, right?
 18 **A. I think I said that in some other venue.**
 19 Q. Yes, you did.
 20 **A. In a deposition, yes. So in that**
 21 **instance, I see where you're coming from. I was --**
 22 **I might have said something like I look forward to**
 23 **it, because it sounded like they were really going**
 24 **to get at what needed to be discovered.**

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1 Q. Right, right. It was -- just so you know,
 2 it was from your testimony in the Highland Wind
 3 project.
 4 **A. Okay. Yes, it's been a while. Sorry.**
 5 Q. Yeah. Now, let's go back to the one
 6 statement you mentioned in your presentation, which
 7 is that slide 21 that I've been asking you about.
 8 I'd like you -- actually, in the context of what you
 9 quoted, I'd like you to look at the objectively
 10 measured results immediately below that that you
 11 didn't mention in your presentation. We're still on
 12 page 5. It's under the heading C, Objectively
 13 Measured Results.
 14 **A. Okay.**
 15 Q. Do you see where I'm at?
 16 **A. Yes.**
 17 Q. "Objectively measured health outcomes were
 18 found to be consistent and statistically related to
 19 corresponding self-reported results. WTN was not
 20 observed to be related to hair cortisol
 21 concentrations, blood pressure, resting heart rate
 22 or measured sleep, e.g., sleep latency, awakenings,
 23 sleep efficiency, following the application of
 24 multiple regression models." Then they go through

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1 measures associated with stress. You see where I
 2 am, subparagraph 1?
 3 **A. Yes.**
 4 Q. And down at the bottom of the second
 5 paragraph, the paragraph starts "Cortisol is a
 6 well-established biomarker." Do you see that?
 7 **A. I don't see it.**
 8 Q. It's --
 9 **A. Oh, yes.**
 10 Q. Okay. You got it, all right. The last
 11 sentence of that paragraph says, "Therefore,
 12 cortisol is particularly useful in evaluating the
 13 potential impact that long-term exposure to WTN has
 14 on one of the primary biomarkers linked to stress."
 15 Did I read that correctly?
 16 **A. Yes.**
 17 Q. All right. And then the next paragraph,
 18 "The results from multiple linear regression
 19 analysis reveal consistency between hair cortisol
 20 concentrations and scores on the perceived stress
 21 scale, i.e., higher scores on this scale were
 22 associated with higher concentrations of hair
 23 cortisol, with neither measure found to be
 24 significantly affected by exposure to WTN.

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1 Similarly, while self-reported high blood pressure,
 2 hypertension, was associated with higher measured
 3 blood pressure, no statistically significant
 4 association was observed between measured blood
 5 pressure or resting heart rate and WTN exposure."
 6 Did I read that correctly, sir?
 7 **A. You did.**
 8 Q. Why didn't you mention that in your
 9 presentation?
 10 **A. Because my slide 21 was annoyance, stress**
 11 **and AHEs, and because I said wind turbine noise**
 12 **annoyance and their subjectively reported results**
 13 **were related to cortisol levels. That's all I said.**
 14 Q. All right, okay. Let's look at the second
 15 objectively measured result which is sleep quality.
 16 That's number 2 on page 6. And then the report goes
 17 through how sleep quality is measured. Do you see
 18 that? We're not going to read all that stuff.
 19 **A. Yes.**
 20 Q. Okay. But they explain how they did what
 21 they did, right?
 22 **A. Yes.**
 23 Q. Okay. And you don't disagree that their
 24 methodology was valid, correct?

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1 **A. I don't know. No, I can't say here -- I**
 2 **can't say here tonight that it was invalid.**
 3 Q. All right. So here's --
 4 **MR. LUETKEHANS:** Maybe if you pull it a
 5 little this way because you're looking at Mr. Blazer
 6 and that's why she's not getting it.
 7 **A. Yeah, yeah, right.**
 8 **MR. BLAZER:** Would it help if I switched
 9 sides?
 10 **MR. LUETKEHANS:** You're fine. I'm too
 11 lazy to move.
 12 **MR. BLAZER:** All right. No disrespect to
 13 the ZBA.
 14 **BY MR. BLAZER:**
 15 Q. All right, here's the conclusion. "While
 16 it can be seen that many variables had a significant
 17 impact on measured sleep, calculated outdoor WTN
 18 levels near the participant's home was not found to
 19 be associated with sleep efficiency, the rate of
 20 awakenings, duration of awakenings, total sleep time
 21 or how long it took to fall asleep."
 22 You didn't mention that conclusion in your
 23 presentation either, did you?
 24 **A. No. I had 75 slides and I don't know if I**

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1 **would have mentioned that or not, but --**
 2 Q. Okay.
 3 **A. -- I was making a specific point.**
 4 Q. All right. So having -- assuming that you
 5 were looking forward to this study before it came
 6 out, do you now consider it a biased study?
 7 **A. Well, it's a -- I think based on the**
 8 **conditions that they set out to use in terms of the**
 9 **methodology, I don't think they're reporting the**
 10 **results that are consistent with the methodology, at**
 11 **least not completely. And I have to say that based**
 12 **on a very long ago recollection of what the methods**
 13 **were. But it sounded like their methods were very**
 14 **valid, but it seems like this report is very limited**
 15 **relative to all the things they were going to study.**
 16 **I don't know if they ran out of money or --**
 17 Q. You don't know any of that.
 18 **A. I don't know any, no.**
 19 Q. Do you consider it a biased study?
 20 **A. Let me just say in answer to that question**
 21 **it's a government study. You asked me was I -- did**
 22 **I think any of these other studies were biased**
 23 **against the wind industry? I don't have any**
 24 **evidence --**

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1 Q. Actually in favor of the wind industry.
 2 **A. I'm sorry, biased in favor of the wind**
 3 **industry, thank you.**
 4 Q. Right.
 5 **A. I don't have any evidence that any single**
 6 **report is biased in that regard. I have experience**
 7 **in Michigan which indicates there's a very heavy**
 8 **relationship between the government and the wind**
 9 **industry. The government asked us to chair a**
 10 **committee --**
 11 **MR. BLAZER:** Mr. Chairman, could you
 12 please direct the witness to answer?
 13 **MR. LUETKEHANS:** He's answering the
 14 question as to bias.
 15 **MR. BLAZER:** I asked him a question about
 16 Canada not about Michigan.
 17 **MR. LUETKEHANS:** He's answering the
 18 question as to all of the studies, including the
 19 Canada study.
 20 **A. Canada is a government.**
 21 **CHAIRMAN CORNALE:** All right. Mr. Punch,
 22 go ahead and finish your answer to this question
 23 please.
 24 **A. This is the Environmental and Workplace**

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1 **Health Division of Health Canada, which is**
 2 **governmentally-related, or that's my understanding,**
 3 **and that's why I included it with these others.**
 4 Q. All right. 270. Dr. Punch, Exhibit 270
 5 is a list of the members, with their resumes, of the
 6 Council of Canadian Academies, The Expert Panel on
 7 Wind Turbine Noise and Human Health. That is the
 8 group that generated the Health Canada study. Have
 9 you ever seen that list before?
 10 **A. I can't say for sure whether I did or not**
 11 **seen the list of names.**
 12 Q. Are there any of those names that you're
 13 familiar with?
 14 **A. I think Harrison, Wayne.**
 15 Q. That's Kerstin Persson Wayne, the person
 16 that --
 17 **A. Yes, at least those two. I think those**
 18 **are the only two actually that I'm aware of.**
 19 Q. And that's the same Wayne that you cited
 20 several times in your presentation?
 21 **A. Yes, it must be.**
 22 Q. Okay, then circling back around, and I'm
 23 not going to ask you to -- the other footnote in the
 24 Wisconsin Wind Siting Council report referred to

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1 Government of Australia National Health and Medical
 2 Research Council, also known as the NHMRC. Do you
 3 recall that?
 4 **A. I do.**
 5 Q. All right, that's 281. Dr. Punch, have
 6 you seen this report before?
 7 **A. I have seen it, yes.**
 8 Q. Have you read it before?
 9 **A. Not all of it. I read some of it. I**
 10 **read, you know, what I needed to know as far as what**
 11 **the main conclusions were. Pretty much consistent**
 12 **with many of the other reports.**
 13 Q. All right. Let's go to the top of page
 14 14.
 15 **A. Okay.**
 16 Q. The paragraph that starts "There is no
 17 consistent evidence." Do you see that?
 18 **A. Oh, yes.**
 19 Q. Okay, right there at the top. "There is
 20 no consistent evidence that noise from wind
 21 turbines, whether estimated in models or using
 22 distance as a proxy, is associated with
 23 self-reported human health effects. Isolated
 24 associations may be due to confounding, bias or

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1 chance. There is consistent evidence that noise
 2 from wind turbines, whether estimated in models or
 3 using distance as a proxy, is associated with
 4 annoyance and reasonable consistency that it is
 5 associated with sleep disturbance and poor sleep
 6 quality and quality of life. However, it is unclear
 7 whether the observed associations are due to wind
 8 turbine noise or plausible confounders." And then
 9 in parentheses, they say D rated. Do you see that?
 10 **A. I do.**
 11 Q. All right. Could you go to page 11, top
 12 of the page? Paragraph that starts "Summary ratings
 13 were provided." Do you see it?
 14 **A. On page 11?**
 15 Q. Page 11, top of the page. "Summary
 16 ratings were provided on a scale from A to D."
 17 **A. I'm sorry, I don't see that on page 11.**
 18 **Consistency of results... page 11. Maybe it's**
 19 **missing.**
 20 Q. It shouldn't be. I'll find it for you.
 21 Well, you know what, let's make it easier because I
 22 have the quote here anyway. I'll just read it to
 23 you.
 24 "Summary ratings were provided on a scale

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1 from A to D. An A rating indicates that there is
 2 good support for association between wind turbine
 3 emissions and human health effects while a D rating
 4 indicates poor support." And it refers to box 2 on
 5 page 39. So you'll see there's a table on page 39.
 6 If you could go to that one. Do you see that one?
 7 **A. I do see it.**
 8 Q. Okay. And it says rating method used to
 9 determine degree of support for an association,
 10 right?
 11 **A. Right.**
 12 Q. Evidence statement rating, description,
 13 and it goes from A, findings from the body of
 14 evidence can be trusted, right?
 15 **A. Yes.**
 16 Q. All the way down to D, which is how they
 17 rated this association between wind turbines and
 18 annoyance. And for D they say, "The body of
 19 evidence is weak and findings cannot be trusted."
 20 Did I read that correctly?
 21 **A. Yes.**
 22 Q. Okay. But if we go -- let's go to your
 23 slide 22.
 24 **A. Okay.**

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1 Q. You say, "Scientific studies have shown
 2 wind turbine noise to be annoying to a substantial
 3 percentage of the population." Which scientific
 4 studies are you referring to?
 5 **A. Well, I had a number of slides on**
 6 **annoyance last evening and I think a lot of them are**
 7 **in there. I think all of them are in there.**
 8 Q. All right, okay. Was -- I think one of
 9 them was a study by somebody named Carmen Krogh,
 10 K-R-O-G-H. Does --
 11 **A. Might be. It could have been in there.**
 12 **What slide? Do you know what slide that was? I**
 13 **can't -- I guess I shouldn't ask you, I should look**
 14 **for it.**
 15 Q. There are several slides. Her name pops
 16 up a couple of times.
 17 **A. Slide 17 begins the section on annoyance,**
 18 **and there are a number of studies indicated there.**
 19 **18, annoyance from wind turbines.**
 20 Q. Right. You're familiar with Ms. Krogh,
 21 right?
 22 **A. Yes. I don't know her personally.**
 23 Q. All right.
 24 **A. But I've read her work, a number of**

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1 **reviews basically.**
 2 Q. Right. I know your copy of the Wisconsin
 3 Wind Siting Council report is rather disheveled
 4 right now, so I'm just going to read you something
 5 from that report going back to Pleasant Ridge
 6 Exhibit 64. It's at the top of page 3.
 7 "There are substantial individual
 8 differences in how people report their perception of
 9 wind energy systems and a negative perception
 10 affects whether an individual reports adverse health
 11 effects that they attribute to wind energy systems.
 12 The majority of individuals living near
 13 utility-scale wind systems do not report stress,
 14 sleep deprivation or chronic, adverse health effects
 15 attributed to wind turbines.
 16 The strength of these conclusions is
 17 complicated by two factors. First, although there
 18 are nine publications on surveys of individuals
 19 living near wind turbines, the conclusions from two
 20 studies are of limited scope. For instance, one
 21 article by Taylor, et al., 2013, surveys individuals
 22 living near wind turbines that have a maximum
 23 generating capacity of 5 kilowatts or less." And
 24 that's the Taylor study we talked about before,

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1 right?
 2 **A. I believe so, yes.**
 3 Q. The small turbines.
 4 **A. It is.**
 5 Q. Right. "These turbines are thus
 6 substantially smaller than a typical utility-scale
 7 turbine and the conclusion of that survey may not be
 8 applicable to the usual wind-health discussion."
 9 And we've gone over that. You agree with that --
 10 **A. I agree with that --**
 11 Q. -- right?
 12 **A. -- yes.**
 13 Q. "A second survey by Krogh, et al., 2011,
 14 was only conducted near existing wind systems where
 15 anecdotal reports of health effects have been
 16 reported. Therefore, without a control group and
 17 due to the use of biased survey questions, it is
 18 difficult to apply that study's conclusions to other
 19 wind projects. Indeed, the bias introduced in the
 20 Krogh, et al., 2011 survey results in reports of
 21 negative effects, sleep disturbance and headache
 22 attributed to wind turbines by over 70 percent of
 23 the participants, which is unusually high compared
 24 to other studies where negative effects were

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1 reported. The limitations of available research
 2 confines the council's survey to only seven
 3 pertinent, unbiased, cross-sectional studies, three
 4 of which use the same data set."
 5 And then at the bottom of the same page,
 6 page 3, they say, "Based on the available
 7 literature, what the council can reasonably conclude
 8 is that some individuals residing in close proximity
 9 to wind turbines perceive audible noise and find it
 10 annoying. A small subset of these individuals
 11 report that this noise negatively affects their
 12 sleep and may result in other negative health
 13 effects. However, based on objective surveys near
 14 wind energy projects, it appears that this group is
 15 in the minority and that most individuals do not
 16 experience annoyance, stress or perceived adverse
 17 health effects due to the operations of wind
 18 turbines."
 19 And you agree with that statement, right?
 20 **A. I'm sorry, what part of that statement?**
 21 **The last part?**
 22 Q. This group is in the minority and that
 23 most individuals do not experience annoyance, stress
 24 or perceived adverse health effects due to the

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1 operation of wind turbines.
 2 **A. Did I say annoyance in my slide? I**
 3 **forget. I know most people don't report adverse**
 4 **health effects, and less than 50 percent certainly**
 5 **report annoyance.**
 6 Q. Okay. Well, I'm sorry, this -- maybe I
 7 read this one too quickly because this one doesn't
 8 say report. I'll read it again.
 9 **A. Okay, well --**
 10 Q. "It appears that this group is in the
 11 minority and that most individuals do not experience
 12 annoyance --
 13 **A. Well --**
 14 Q. -- stress or perceived adverse health
 15 effects due to the operation of wind turbines."
 16 **A. To get to the word experience, I think you**
 17 **have to have some report. With the concept of**
 18 **annoyance, I mean how else would one get to**
 19 **determine whether how one is annoyed if you don't**
 20 **ask people? There's no physiological measure.**
 21 Q. Do you disagree with that statement I just
 22 read to you twice?
 23 **A. I -- that's what they said.**
 24 Q. I'm asking do you disagree with it?

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1 **A. If the implication is that very few people**
 2 **report annoyance from wind turbines or even adverse**
 3 **health effects, I'd say a nontreated number do**
 4 **report and experience adverse health effects,**
 5 **including annoyance.**
 6 Q. We'll get to that in a few moments,
 7 assuming we have time tonight. What I'm asking is
 8 if you disagree with the statement that this group
 9 is in the minority and that most individuals do not
 10 experience annoyance, stress or perceived adverse
 11 health effects due to the operation of wind
 12 turbines. I'm simply asking you if you agree or
 13 disagree --
 14 **A. Well, I can't --**
 15 Q. -- with that statement.
 16 **A. I don't know how experience is measured**
 17 **here if not through self-report. And other studies**
 18 **of self-reporting indicate that a number of people**
 19 **are annoyed and have health problems, so it's hard**
 20 **for me to say.**
 21 Q. So you don't know if you agree or
 22 disagree?
 23 **A. I don't know if I agree or disagree.**
 24 Q. Okay, that's fair.

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1 **CHAIRMAN CORNALE:** Mr. Blazer, just I hate
 2 to interrupt, I've been searching through this,
 3 Pleasant Ridge Exhibit 281 that you've given to us.
 4 I don't see this referenced anywhere within his
 5 presentation nor on his literature citing, the
 6 references. Can you --
 7 **MR. BLAZER:** I'm reading from Pleasant
 8 Ridge Exhibit 64, the Wisconsin Wind Siting Council.
 9 **CHAIRMAN CORNALE:** I understand, I
 10 understand. But 281, I'm trying to decide the
 11 validity, whether this evidence -- you're adding
 12 this, are you not? Did he make reference to this
 13 within his presentation?
 14 **MR. BLAZER:** To annoyance?
 15 **CHAIRMAN CORNALE:** No, to Pleasant
 16 Ridge -- or to this specific study?
 17 **MR. BLAZER:** Pleasant Ridge 64?
 18 **CHAIRMAN CORNALE:** 281. 281, this big
 19 thick --
 20 **MR. BLAZER:** That's not what I'm reading
 21 from.
 22 **CHAIRMAN CORNALE:** I understand.
 23 **MR. BLAZER:** Okay.
 24 **CHAIRMAN CORNALE:** I -- yeah. No, I've

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1 been looking for ten minutes to try to --
 2 **MR. BLAZER:** Oh, no.
 3 **CHAIRMAN CORNALE:** -- identify it. That's
 4 why I'm --
 5 **MR. BLAZER:** That one is referenced in
 6 Exhibit 64, the Wisconsin Wind Siting Council
 7 report. That's one of the studies that they said
 8 they were waiting for.
 9 **CHAIRMAN CORNALE:** Okay.
 10 **MR. BLAZER:** That was --
 11 **CHAIRMAN CORNALE:** I'm looking for the
 12 connection.
 13 **MR. BLAZER:** Oh, I got you.
 14 **CHAIRMAN CORNALE:** Okay, thank you.
 15 **MR. BLAZER:** Those were -- remember, I
 16 referenced two footnotes that they said they were
 17 waiting for, meaning the Health Canada study and
 18 that Australian report.
 19 **CHAIRMAN CORNALE:** Okay, move on. Thank
 20 you.
 21 **MR. BLAZER:** Sure.
 22 **BY MR. BLAZER:**
 23 Q. Back to your slide 23.
 24 **A. Okay.**

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1 Q. All right. And it's question three, can
 2 psychological expectations, i.e. --
 3 **A. I'm sorry, that's not number 23, is it?**
 4 **Psychological -- oh, question three.**
 5 Q. Question three on slide 23.
 6 **A. In my slide presentation?**
 7 **MR. LUETKEHANS:** No.
 8 **MR. BLAZER:** I may have the wrong page
 9 number. Let me just read it.
 10 Q. Can psychological expectations, i.e., the
 11 nocebo effect, satisfactorily explain AHEs from wind
 12 turbine noise? From whatever slide that is.
 13 **A. 26.**
 14 Q. Sorry, 26. I can only blame myself. You
 15 do know that the nocebo effect is a recognized
 16 psychogenic effect based on the patient's
 17 expectations and perceptions, correct?
 18 **A. I can believe that, yes.**
 19 Q. Okay. And are you aware that the nocebo
 20 effect can have both psychological and physiological
 21 effects?
 22 **A. Well, I'm not a medical doctor of course**
 23 **and -- but I do know that psychosomatic illnesses**
 24 **exist.**

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1 Q. Okay. Nocebo effect was discovered long
 2 before the advent of --
 3 **A. Yes.**
 4 Q. -- utility-scale wind turbines, right?
 5 **A. Yes. Frankly, I had not heard of it until**
 6 **I got interested in wind turbines.**
 7 Q. But in the course of your study, you
 8 learned it's been around for a very long time,
 9 right?
 10 **A. Right.**
 11 Q. Okay. I hope I have this slide number
 12 right on this one. Slide 29. "While psychological
 13 expectations and the power of suggestion --" am I on
 14 the right one?
 15 **A. That's right.**
 16 Q. All right, this one I got right "--
 17 conceivably can influence perception of the effects
 18 of WTN on health status, no scientifically valid
 19 studies have yet convincingly shown that
 20 psychological forces are the major driver of such
 21 perceptions." What do you mean by scientifically
 22 valid?
 23 **A. Well, I went through my criticisms rather**
 24 **hurriedly last night of why I thought these studies**

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1 **were poorly designed.**
 2 Q. That's not -- that's not my question. My
 3 question is what did you mean by the phrase
 4 scientifically valid?
 5 **A. Studies that follow scientific principles**
 6 **using the scientific method yielding repeatable**
 7 **reliable results. Study methodologies that are**
 8 **consistent with -- certainly with reason, which I**
 9 **didn't think these were, not using infrasound and**
 10 **telling the reader that you're using infrasound when**
 11 **you really didn't. I don't believe they used**
 12 **infrasound in one of their conditions to give the**
 13 **subjects any basis for comparing with the sham or no**
 14 **infrasound condition.**
 15 Q. I'm not just talking about the nocebo
 16 studies. I'm talking about any studies.
 17 **A. Okay.**
 18 Q. So, for example, do you consider the
 19 Health Canada study a scientifically valid study?
 20 **A. I'd have to go further into it to really**
 21 **tell you whether I would define it as scientifically**
 22 **valid. I don't have a final answer there and I**
 23 **think it's up to individual researchers to define**
 24 **it, and basically define it, as I said, by using**

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1 **recognized scientific tools, using hypothesis**
 2 **testing typically, using methodologies that are**
 3 **up-to-date.**
 4 Q. So you don't know if the Health Canada
 5 study is, as you described it, a --
 6 **A. It was when I read it. It seemed to be.**
 7 Q. Okay.
 8 **A. But I can't tell that from the report.**
 9 Q. All right. How about the Australian
 10 study, the 281, the NHMRC study?
 11 **A. That --**
 12 Q. Is that a scientifically valid study?
 13 **A. Rapley doesn't think so.**
 14 Q. I'm not asking about somebody named
 15 Rapley. I'm asking about somebody named Punch.
 16 **A. I don't think it's well-designed. I don't**
 17 **think it -- I think it makes assumptions that aren't**
 18 **valid.**
 19 Q. Have you conveyed your concerns to the
 20 government of Australia?
 21 **A. No.**
 22 Q. All right. When you report -- when you
 23 wrote your report for the State of Michigan, Exhibit
 24 269, you were looking for peer reviewed studies,

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1 right? We went over that statement.
 2 **A. That was a committee report and we as a**
 3 **committee had to compromise on language and we used**
 4 **that term. We said it in the context of it was our**
 5 **desire to look at as much scientific -- as much peer**
 6 **reviewed studies as possible. I as a researcher on**
 7 **that committee was not happy with the limited number**
 8 **of studies that we actually reviewed, and I tried to**
 9 **get us to do more of that by assigning individual**
 10 **members studies to come and talk about at the**
 11 **meeting.**
 12 Q. Did you file a minority report?
 13 **A. I did.**
 14 Q. Where is it?
 15 **A. It's on online. If you Google Punch**
 16 **Rosenman wind turbines, I think you'll find it.**
 17 Q. All right. Let's see what you said or
 18 what the committee said in its overall report, the
 19 committee that you chaired. Back to Exhibit 269.
 20 **A. May I add the note that you say it's a**
 21 **report. It was one of the draft reports, but it was**
 22 **never submitted as an official document to the**
 23 **Michigan state government.**
 24 Q. All right. And the three people who were

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1 on that committee wrote that report, right?
 2 **A. The minority report?**
 3 Q. No, the committee that you chaired --
 4 **A. No.**
 5 Q. -- issued that report, right?
 6 **A. There were more than three people on the**
 7 **overall committee. I think there was seven. There**
 8 **were three who wrote the minority report.**
 9 Q. All right. Well, the three people -- I
 10 think we covered this a while ago already. There
 11 were three people identified as the people involved
 12 in that report. You're one of them, right?
 13 **A. Right.**
 14 Q. Okay. Let's go to page 2, limitations on
 15 noise.
 16 **A. Okay.**
 17 Q. "We recommend that municipalities base
 18 their decisions about noise limitations on the best
 19 available peer reviewed scientific evidence." We
 20 covered this --
 21 **A. Yes, it's our recommendation.**
 22 Q. -- before. The next paragraph here, "It
 23 is also important to recognize that there is no
 24 published peer reviewed literature showing the

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1 absence of a link. This issue should be
 2 periodically revisited by interdisciplinary experts
 3 as future peer reviewed evidence becomes available."
 4 Is the group that generated the Health
 5 Canada study a group of interdisciplinary experts?
 6 **A. I believe it is. As I told you, I don't**
 7 **know the people involved, but from their titles, it**
 8 **appears to be --**
 9 Q. Okay.
 10 **A. -- the case.**
 11 Q. 271. Dr. Punch, have you seen Pleasant
 12 Ridge 271 before?
 13 **A. I've never seen this.**
 14 Q. All right. I'll represent to you that
 15 this is a peer reviewed study that was published in
 16 Frontiers in Public Health on November 11, 2014,
 17 just a couple of months ago.
 18 **A. Okay. I've heard about it. I just**
 19 **haven't seen it.**
 20 Q. Okay. And let's look at the abstract
 21 rather than reading the whole thing.
 22 **A. Okay.**
 23 Q. Although you may. "In this paper, we
 24 argue that health complaints are more likely to be

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1 explained by the nocebo response whereby adverse
 2 effects are generated by negative expectations."
 3 And that's -- that's classically the description of
 4 a nocebo response, right? I'm not asking if you
 5 agree. I'm just asking if that's the classic
 6 description.
 7 **A. Yes, that's a classic description.**
 8 Q. Okay. "When individuals expect a feature
 9 of their environment or medical treatment to produce
 10 illness or symptoms, then this may start a process
 11 where the individual looks for symptoms or signs of
 12 illness to confirm these negative expectations."
 13 **MR. LUETKEHANS:** I'm going to object.
 14 This is the exact same kinds of questions I was not
 15 allowed to ask of Pleasant Ridge's experts when they
 16 had not seen a report or had not reviewed it or
 17 analyzed it in their testimony or elsewhere.
 18 **CHAIRMAN CORNALE:** All right. That is
 19 correct. We -- if you hadn't seen the information,
 20 we hardly could question you on it, so --
 21 **MR. BLAZER:** Well, if I may be heard on
 22 that, Mr. Cornale. This witness has said repeatedly
 23 that he conducts an ongoing review of the
 24 literature. Now he claims he hasn't seen this one

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1 before, but this is a recent study that -- and he's
 2 testifying here as evidently an expert on any number
 3 of things and he's made any number of claims about
 4 the applicability or lack thereof of the nocebo
 5 effect. And I think that we are absolutely
 6 entitled, since he's been tendered as an expert, to
 7 question him regarding his opinions regarding a very
 8 recent article on the very subject that he's
 9 testifying about.
 10 **MR. LUETKEHANS:** This is the exact same
 11 argument --
 12 **MR. BLAZER:** It's absolutely not.
 13 **MR. LUETKEHANS:** -- I made not two months
 14 ago.
 15 **CHAIRMAN CORNALE:** Okay, that's enough.
 16 **MR. BLAZER:** Because you asked --
 17 **CHAIRMAN CORNALE:** Mr. Blazer, here we go,
 18 here's my decision on it. My decision is you can
 19 put it into evidence. If Dr. Punch has the
 20 opportunity to come back or we -- he needs to come
 21 back, you can ask him questions about it at that
 22 point in time.
 23 **MR. BLAZER:** Okay, fair enough.
 24 **CHAIRMAN CORNALE:** Pleasant Ridge Exhibit

Page 1511

1 271 says what it says.
 2 **MR. BLAZER:** All right.
 3 **CHAIRMAN CORNALE:** He can review it. You
 4 can question him later if that happens.
 5 **MR. BLAZER:** Yeah, I believe we've already
 6 discussed he is going to be coming back, so we'll
 7 deal with it. That's fine, I understand. Thank
 8 you.
 9 **BY MR. BLAZER:**
 10 Q. Let's go to slide 3, recent professional
 11 experience.
 12 A. Okay.
 13 Q. And you've got public comments,
 14 presentations to zoning boards and commissions in
 15 several Michigan counties --
 16 A. Yes.
 17 Q. -- is that right? Do you keep track of
 18 wind development in Michigan?
 19 A. Yes, to some extent. I don't keep logs or
 20 written documentation. I try to be aware and it
 21 starts sometimes with newspaper accounts --
 22 Q. Right.
 23 A. -- of what's going on in the state, for
 24 example.

Page 1512

1 Q. So you've testified -- and this is just a
 2 lead-in.
 3 A. Yes.
 4 Q. Slides 5 to 8, that's your discussion
 5 about the Michigan Wind I project, right?
 6 A. Sorry. Oh, yes, 5 to 8?
 7 Q. Right, 5 to 8.
 8 A. That's right, that's right.
 9 Q. That's the 46 turbines, 69 megawatt
 10 project.
 11 A. It's really about the family who lives
 12 there.
 13 Q. Right, I understand. But this was the
 14 first utility-scale wind project in Michigan, right?
 15 A. It was.
 16 Q. And it started operation in December of
 17 2008?
 18 A. Must be about right, yes.
 19 Q. Okay. And are you familiar with the
 20 current status of wind development in Michigan?
 21 A. I know it's expanding greatly.
 22 Q. 297. Now, I'll represent to you that this
 23 was a report that was issued by the Pew Institute.
 24 It's called Pew Michigan Policy Brief and just a

Page 1513

1 quick question.
 2 First, I'll just call your attention to
 3 something and then I'll ask you a question which
 4 potentially has nothing to do with that document.
 5 On page 2, it says, "Total capital
 6 investment in renewable energy from 2009 --" which
 7 would be the year following the Michigan Wind I
 8 project that you testified about "-- total capital
 9 investment in renewable energy from 2009 to 2013
 10 topped \$2 billion and is expected to grow to \$3.5
 11 billion by 2015. From 2009 to 2013, more than 1
 12 gigawatt of new wind capacity was installed, almost
 13 95 percent of the total clean energy added in those
 14 five years."
 15 So then I'd like to go back to page 22 --
 16 excuse me, slide 22 of your presentation.
 17 A. Okay.
 18 Q. And it says, "Scientific studies have
 19 shown that wind turbine noise to be annoying to a
 20 substantial percentage of the population." Right?
 21 A. Right.
 22 Q. Where is that substantial percentage of
 23 the population among all those wind farms in
 24 Michigan?

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1 A. I don't --
 2 **MR. LUETKEHANS:** Objection, relevance. I
 3 don't -- first of all, objection to the form of the
 4 question. I have no idea what he's asking. And
 5 secondly, the fact that Michigan may have approved,
 6 under whatever standards, we heard that I'm not
 7 allowed to ask about Wisconsin standards a number of
 8 times, and whether it was -- with Michigan, under
 9 whatever standards, its approval is completely
 10 irrelevant.
 11 **MR. BLAZER:** I'm not asking him about the
 12 Michigan approval standards. This person said that
 13 scientific studies have shown wind turbine noise to
 14 be annoying for a substantial percentage of the
 15 population. And I'm asking him where that
 16 substantial percentage is in his home state that has
 17 seen the dramatic growth in wind turbine development
 18 between his first project and today. I'm asking him
 19 where are the people who are so annoyed.
 20 **MR. LUETKEHANS:** I object to foundation.
 21 **CHAIRMAN CORNALE:** I think that 297 -- and
 22 I'm not sure. If you want to ask him about the
 23 validity of the statement on 22 --
 24 **MR. BLAZER:** That's not my --

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1 **CHAIRMAN CORNALE:** -- ask him about the
2 validity of the statement. And we don't need to
3 talk about Michigan and their rapid expansion of
4 wind energy.
5 **MR. BLAZER:** That's not --
6 **CHAIRMAN CORNALE:** Okay, let's talk
7 about -- if you want to know about the scientific
8 studies, ask that question.
9 **MR. BLAZER:** All right.
10 **CHAIRMAN CORNALE:** We're done, we're done
11 talking about 297.
12 **MR. BLAZER:** All right. And I was done
13 talking about 297.
14 **BY MR. BLAZER:**
15 Q. My question very simply is: Among all the
16 wind development in Michigan, which you've said
17 you've kept abreast of, where is the substantial
18 percentage of the population that is annoyed by
19 noise from wind turbines?
20 **MR. LUETKEHANS:** Same objection.
21 **CHAIRMAN CORNALE:** Mr. Punch, don't answer
22 that. We're moving on. All right.
23 Q. Let's go to your slide 31. Wind turbine
24 noise causes AHEs. That's your slide, right?

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1 **A. 31? Yes, followed by: Where is the**
2 **evidence?**
3 Q. Right. And one of your bullets is expert
4 testimony in legal proceedings in the USA and other
5 countries, correct?
6 **A. I'm assuming other countries because I**
7 **know a lot of legal things have gone on, legal**
8 **proceedings have gone on there. The public is --**
9 **there's been public outcry. So I certainly haven't**
10 **been personally involved with those, but it's just a**
11 **general statement that a lot of legal testimony has**
12 **been given.**
13 Q. Right. And that's part of the basis for
14 your statement that wind turbine noise causes AHEs,
15 correct?
16 **A. Part of it.**
17 Q. Okay. And last night you said you didn't
18 bring any of those reports of legal proceedings with
19 you; is that right?
20 **A. I did say that I did not bring them. I**
21 **mean it's a lot of material.**
22 Q. All right.
23 **A. I don't have all of them anyway. I mean I**
24 **have some in other places, other states.**

Page 1517

1 Q. Well, last night you said it's too
2 tedious. Do you remember that?
3 **A. Probably. I mean I probably said that.**
4 Q. Okay, but I assume you at least have read
5 at least some of the expert testimony in legal
6 proceedings in the USA and other countries?
7 **A. I have them on my office computer**
8 **basically, yes.**
9 Q. Okay. Let's go back to the discussion of
10 what may constitute a scientifically valid study.
11 Slide 34.
12 **A. Okay.**
13 Q. And this is where you talk about
14 Pierpont's book?
15 **A. Yes.**
16 Q. And do you consider that a scientifically
17 valid study?
18 **A. I do.**
19 Q. All right.
20 **A. It's an observational study.**
21 Q. Slide 9. That's your -- the reference to
22 your Audiology Today article --
23 **A. Yes.**
24 Q. -- is that right?

Page 1518

1 **A. Yes.**
2 Q. Actually yours and your friend James, Rick
3 James, correct?
4 **A. My colleague Rick James and a student.**
5 Q. Okay. Now this article -- Audiology Today
6 is a nonrefereed journal, correct?
7 **A. It -- I didn't make the point tonight when**
8 **I talked about peer reviewed process, but all**
9 **journals to some extent are read by somebody else**
10 **before it's accepted. It is not probably acceptable**
11 **in the vernacular today of what a peer reviewed**
12 **study is if you take a very technical view of an**
13 **optimal peer review process as I first described it**
14 **tonight.**
15 **So I would say it's not -- I've never**
16 **really said it was a peer reviewed article, but it**
17 **is like Psychology Today, like Acoustics Today, and**
18 **some very reputable people publish articles. The**
19 **president of the Academy of American Audiology was**
20 **the one who peer reviewed this one.**
21 Q. Well, you know that you've previously
22 identified this article as appearing in a
23 nonrefereed journal, correct?
24 **A. Non -- well, okay, yeah. And as I just**

Page 1519

1 **said, it's really not by most people, but I don't --**
 2 **I'm not that black-and-white, I'm sorry. The world**
 3 **is grayer.**
 4 Q. All right. Now, that article of yours in
 5 Audiology Today came out in 2010, right?
 6 **A. That's right.**
 7 Q. And that was before the 269 report for the
 8 State of Michigan, correct?
 9 **A. Based on the date you gave me, yes, I**
 10 **think I -- that sounds right.**
 11 Q. 292. Exhibit 292 is your article, right?
 12 **A. It appears to be, yes.**
 13 Q. Okay. And you and Rick James and I
 14 believe you said a student wrote this?
 15 **A. We did.**
 16 Q. Okay. If you can go to page 24.
 17 **A. Okay.**
 18 Q. The paragraph that starts, "The energy
 19 generated by large wind turbines," do you see that?
 20 **A. Yes, yes.**
 21 Q. "The energy generated by large wind
 22 turbines can be especially disturbing to the
 23 vestibular systems of some people, as well as cause
 24 other troubling sensations of the head, chest or

Page 1520

1 other parts of the body. Dr. Nina Pierpont, 2009,
 2 in her definitive natural experiment on the subject,
 3 refers to these effects as wind turbine syndrome,
 4 WTS. Table 1 lists the symptoms that in various
 5 combinations characterize WTS. Although hearing
 6 impairment is not one of the symptoms of WTS,
 7 audiologists whose patients report these symptoms
 8 should ask them if they live near a wind turbine."
 9 So is it correct that you consider what
 10 Pierpont did to be definitive?
 11 **A. Well, I've been questioned on that before**
 12 **and I understand your -- I think I understand where**
 13 **you're coming from legally.**
 14 Q. I don't know if I understand where I'm
 15 coming from, so --
 16 **A. It was definitive -- it was definitive I**
 17 **think in the sense that it was kind of a first to**
 18 **put a name on or label on the phenomenon. I don't**
 19 **know that I would agree it's a syndrome. I think it**
 20 **is. I think there are a number of people who have a**
 21 **combination of symptoms which defines a syndrome.**
 22 **Other people have stayed away from that name because**
 23 **of the avocation of Pierpont.**
 24 **But I don't think it's a final answer, so**

Page 1521

1 **it's not definitive in the sense of being final.**
 2 Q. All right. Go to your slide 36. You said
 3 -- I'm sorry, I'll wait until you are there. Are
 4 you there?
 5 **A. I am.**
 6 Q. You say, "The wind industry is harshly
 7 critical of her study --" her referring to Pierpont,
 8 right?
 9 **A. Yes.**
 10 Q. "-- as being nonscientific, but increasing
 11 body of scientific evidence supports her
 12 observations and their link to wind turbine noise as
 13 well as mechanisms responsible for symptoms."
 14 Correct?
 15 **A. Correct.**
 16 Q. You do know it's not just the wind
 17 industry that has been harshly critical of
 18 Pierpont's work --
 19 **A. That's not true.**
 20 Q. Let me finish.
 21 **A. Sorry.**
 22 Q. You do know that it's not just the wind
 23 industry that has been harshly critical of
 24 Pierpont's work as being nonscientific, right?

Page 1522

1 **A. I would say I believe that advocates for**
 2 **the wind industry have been the ones who are most**
 3 **harshly critical of her work.**
 4 Q. Well, this is the book, right? There it
 5 is, Wind Turbine Syndrome.
 6 **A. Okay.**
 7 Q. Right? Have you read it?
 8 **A. I read a prepublication copy. I don't**
 9 **know how much was changed, but I did read it.**
 10 Q. So you've never read the final published
 11 version?
 12 **A. Not all -- no, no.**
 13 Q. Okay. Well, when did you read that
 14 prepublication copy?
 15 **A. It was after Huron County, my visit to**
 16 **Huron County.**
 17 Q. So it was sometime in 2009?
 18 **A. That sounds about -- it was right before**
 19 **it came out. I think -- my impression, whether it's**
 20 **right or wrong, is it was about to come out very**
 21 **soon.**
 22 Q. How did you find out that it was about to
 23 come out?
 24 **A. Probably through Rick James.**

Page 1523

1 Q. Well, and --

2 **A. But then I began to have conversations**

3 **online with Nina Pierpont.**

4 Q. And Rick James participated in the book,

5 right?

6 **A. I don't know the involvement. He might**

7 **have been a reviewer. There were a number of**

8 **reviewers for that book. So by that definition, it**

9 **was peer reviewed.**

10 Q. Well, you're not aware that Ms. Pierpont

11 actually refers to information that she obtained

12 from Rick James?

13 **A. Oh, yes, yes. I do recall that, yes.**

14 Q. Okay. All right. And Pierpont and her

15 husband have a website called Wind Turbine Syndrome,

16 right?

17 **A. Yes.**

18 Q. All right. And Mr. James has been a

19 frequent contributor to that site. You're aware of

20 that, right?

21 **A. I don't -- no, I'm not aware that he's a**

22 **voluntary contributor. I'm aware that some of his**

23 **work might appear there, which may have nothing to**

24 **do with his contributions.**

Page 1524

1 Q. And some of your work has appeared on that

2 site as well.

3 **A. Again, same thing, I didn't put it there,**

4 **I didn't ask that it be put there.**

5 Q. Are you saying you've never voluntarily

6 posted any comments on that website?

7 **A. I don't know. Maybe I have. If I did,**

8 **I'm sure you probably have them.**

9 Q. You did and I do, but I think that will

10 take care of that.

11 **A. Right, okay.**

12 Q. So fine.

13 **A. I don't recall it, but I -- it's not --**

14 **doesn't surprise me that I might have.**

15 Q. We're going to go on just fine. All

16 right. Now, last night you said, "She published a

17 book, and yes, it was self-published, the wind

18 companies like to point that out, in 2009 -- the

19 transcript says "quoting" but I believe you said

20 "coining" -- the term wind turbine syndrome." Do

21 you remember saying that yesterday?

22 **A. Something like that, yes.**

23 Q. The book was put out by a publishing

24 company called Case Selected Books.

Page 1525

1 **A. That's right.**

2 Q. And Case Selected Books has -- it used to

3 be two, it has actually only three published books,

4 correct?

5 **A. I think her and her husband have published**

6 **books under that company --**

7 Q. Right.

8 **A. -- which is self-publication essentially.**

9 Q. She self-published -- she wrote this one

10 and her husband has two other books that were

11 published by their company?

12 **A. I believe so.**

13 Q. All right. And she and her husband are

14 two of the four members of that company's editorial

15 board. You're aware of that?

16 **A. That might be true. I'm not surprised if**

17 **it's true.**

18 Q. It's an unusual name, but you know her

19 husband's name is Calvin Luther Martin?

20 **A. Calvin Martin, yes.**

21 Q. Okay. Could you go to your slide 13

22 please? And I just -- I'm not going to read it.

23 This is the slide on preliminary thoughts,

24 perspectives, biases, pro-wind, anti-wind,

Page 1526

1 pro-health.

2 **A. Right.**

3 Q. Okay. Last night in referring to that

4 slide you said anti-wind, and I think we would all

5 agree there are at least these two groups, don't

6 install wind turbines anywhere. That's -- you're

7 saying that's their view.

8 **A. That's how I characterize it anyway.**

9 Q. Don't install wind turbines anywhere.

10 Wind really isn't an economically viable source of

11 renewable energy anyway when you look at the

12 financial aspects of it, and all the government

13 subsidies should just simply stop. That's the

14 anti-wind --

15 **A. That's not what I said of myself. That's**

16 **what I said of the anti --**

17 Q. Of the anti-wind groups. You're not

18 saying it about yourself. You're saying it about

19 the anti-wind groups.

20 **A. Right.**

21 Q. And you do know that Mr. Martin,

22 Pierpont's husband, is an outspoken anti-wind

23 activist, right?

24 **A. Let me respond this way. I detest the**

Page 1527

1 website. I detest the language he uses. I don't
 2 think he helps her. I think they're really two
 3 separate individuals professionally. That's my
 4 opinion after seeing his language. He uses four
 5 letter words. I wouldn't use those words
 6 professionally certainly. So I don't think he helps
 7 her in that sense. So that's my view of the
 8 website.
 9 Q. We just found something else we agree on.
 10 And what you just referred to -- 276. Dr. Punch,
 11 when you said he uses four letter words, he doesn't
 12 help her, that's the document you were referring to,
 13 isn't it?
 14 A. I think it actually might be more
 15 extensive than this document.
 16 Q. Okay.
 17 A. Okay.
 18 Q. But you've seen --
 19 A. I've seen --
 20 Q. -- Pierpont's husband, one of the
 21 publishers, one of the members of the editorial
 22 board of the company that published her book,
 23 writing things like that, right?
 24 A. But she never does as far as I know.

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1 Q. That's not my question, sir. You have
 2 seen --
 3 A. I have seen it, yes, yes.
 4 Q. Okay.
 5 A. And I don't like it.
 6 Q. All right, got it. Now, we're not going
 7 to go through a lot of it because, you're right,
 8 it's extremely profane.
 9 A. It is.
 10 Q. So I'm just going to ask you a couple of
 11 things about it.
 12 A. Sure. About this document?
 13 Q. About that document, because I'm going to
 14 ask you a couple of your impressions about it. He
 15 starts out on page 1, "I've been fighting the wind
 16 Bs --" I'll tell June later what that word is "--
 17 well over four years, four years devoted to almost
 18 nothing else."
 19 So if you go to pages 2 to 3, he's
 20 actually -- you can see what he's doing is, and this
 21 is his impression of how you would write a book
 22 about battling wind farms, right?
 23 A. Essentially, yes.
 24 Q. All right. Chapter 5 he says, "Following

Page 1529

1 the rules of public meetings does not work. The
 2 meetings are (a) a charade, (b) a farce, (c) a hoax,
 3 and (d) altogether a mockery of public
 4 participation." And you certainly don't agree with
 5 that.
 6 A. Following the rules of public meetings
 7 does not work, do I agree with that, that's the
 8 question?
 9 Q. Yes. Actually I said you don't agree with
 10 that, right?
 11 A. In general, not, I don't -- I don't agree.
 12 Q. Are there instances where you do agree?
 13 A. No, I guess I agree that you should follow
 14 the rules or you shouldn't be going to the meetings
 15 or you should try to changes the rules.
 16 Q. Okay. And let's see how Pierpont's
 17 husband feels about folks who participate in wind
 18 farm projects. That's on page 4.
 19 MR. LUETKEHANS: I guess I really want to
 20 get to the relevance here. I'm trying to figure out
 21 and trying to give some leeway, but I'm really lost
 22 here.
 23 MR. BLAZER: This is the publisher of the
 24 book he's relying on.

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1 MR. LUETKEHANS: Which he said was
 2 self-published by her.
 3 MR. BLAZER: By Case Selected Books, the
 4 company that she and her husband run.
 5 MR. LUETKEHANS: We're so far afield here.
 6 MR. BLAZER: No, we're not. No, we're
 7 not. He's already admitted that there are anti-wind
 8 groups who are biased against wind farms. This is
 9 the publisher of the book that he's relying on.
 10 CHAIRMAN CORNALE: All right. The
 11 objection is founded. This -- I understand your
 12 line of questioning somewhat, but at the same time,
 13 we really don't need exhibits like this even in the
 14 record.
 15 I think we should strike -- I'm going to
 16 make the decision we're going to strike Pleasant
 17 Ridge Exhibit 276. We're throwing it out of the
 18 record. The quality of the material is absurd and
 19 not anything that's founded or -- it's junk. I'm
 20 sorry, it's junk. Let's just move on past this. We
 21 just need to move on.
 22 MR. BLAZER: Mr. Chairman, I couldn't
 23 agree more. It is absolutely junk.
 24 MR. LUETKEHANS: And neither can Dr. Punch

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1 obviously.

2 **BY MR. BLAZER:**

3 Q. Let's make sure we're on the same page

4 about exactly who Mr. Martin's wife is and what she

5 did, okay? First, Pierpont is a pediatrician,

6 right?

7 **A. Correct.**

8 Q. She's not an epidemiologist, correct?

9 **A. No, correct.**

10 Q. She's not a neurologist, right? Correct?

11 **A. I think that's correct.**

12 Q. She's not an otolaryngologist.

13 **A. That's correct.**

14 Q. And otolaryngologists are also M.D.s that

15 are known as ear, nose and throat doctors?

16 **A. Ear, nose and throat doctors, yes.**

17 Q. Audiologists routinely work with ENTs.

18 **A. Yes, many of us do and I have.**

19 Q. And speaking of that, she's also not an

20 audiologist, right?

21 **A. Correct.**

22 Q. Okay. 275. Pleasant Ridge 275, Dr.

23 Punch, are some excerpts from this book that you

24 consider to be definitive. Let's start with page

Page 1532

1 21. It's the first full paragraph.

2 **A. Okay.**

3 Q. "For those who read this report and

4 recognize their own symptoms, the appropriate

5 medical specialist to consult would be a

6 neurootologist or otoneurologist who is an

7 otolaryngologist, ear, nose and throat doctor, who

8 specializes in balance, the inner ear and their

9 neurological connections." Did I read that

10 correctly?

11 **A. Yes.**

12 Q. All right. And neurootology is a branch

13 of clinical medicine that studies and treats

14 neurological disorders of the ear, correct?

15 **A. That's right.**

16 Q. All right. Now, let's go back to the

17 basis for Pierpont's creation of something called

18 wind turbine syndrome. Your slide 34.

19 **A. Okay.**

20 Q. And you say, and you testified to this,

21 that the term was coined by Pierpont?

22 **A. I thought it was, yes.**

23 Q. And just so we're clear --

24 **A. I think it is, yes.**

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1 Q. Right, exactly. That name, wind turbine

2 syndrome, never existed before she created it,

3 right?

4 **A. I don't think it did.**

5 Q. Okay. And you're familiar with what she

6 did to reach her conclusion, right?

7 **A. The case series study.**

8 Q. Right.

9 **A. The interviews with families, yes.**

10 Q. Okay. Now, last night you said -- this is

11 at page 1376 of the transcript last night -- "She

12 describes symptoms of 38 members of ten families in

13 New York who came into her practice." That's what

14 you said last night.

15 **A. I don't mean they walked in the door, but**

16 **she had -- I assume she said many of them came to**

17 **her, but she heard about it. And my understanding**

18 **was that she did interview the families.**

19 Q. Well --

20 **A. Some of it was phone I think. And I don't**

21 **think she talked to them all in person. I would**

22 **assume she might have, but I can't just assume**

23 **anything.**

24 Q. I think we'll be able to clarify what you

Page 1534

1 might have meant by came into her practice.

2 **A. Okay.**

3 Q. On your slide 34 --

4 **A. Yes.**

5 Q. -- you say findings based on personal

6 interviews, right?

7 **A. That's what I said, yes.**

8 Q. All right. Well, that's not entirely

9 accurate, right?

10 **A. Okay. It's been a while since I read the**

11 **book.**

12 Q. Okay. Well, but that's the statement you

13 made to this board yesterday --

14 **A. Yes.**

15 Q. -- right?

16 **A. Well, I meant contact and getting**

17 **information through the interview process. Is that**

18 **not correct?**

19 Q. Well, let's try it this way. She got

20 information about 37 people, right?

21 **A. I thought it was 38, but 37 is close.**

22 Q. Well, let's start this way. I'm going to

23 tell you something first and then I'm going to tell

24 you where to find it. She only spoke to 23 of them

Page 1535

1 and that was on the phone. Do you remember that?
 2 **A. I remember a phone was involved, yes.**
 3 Q. And that's at page 10 of her book. She
 4 says -- it's the middle paragraph, we'll get to this
 5 paragraph in its entirety later -- one meeting that
 6 was conducted entirely by clinical interview over
 7 the telephone.
 8 **A. Okay.**
 9 Q. Do you see that?
 10 **A. Okay, I was wrong.**
 11 Q. And then if you go to page 41, she says
 12 down at the bottom of the page under results, "I
 13 interviewed 23 adult and teenaged members of ten
 14 families, collecting information on all 38 adult,
 15 teen and child family members." Do you see that?
 16 **A. No, I don't. I don't have it.**
 17 Q. Bottom of page 41.
 18 **A. Oh, is it in here?**
 19 Q. Yes.
 20 **A. This is a short document. I see it, okay.**
 21 Q. All right. Under results.
 22 **A. Okay.**
 23 Q. So out of the 37 --
 24 **A. Yes, okay.**

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1 Q. Out of the 37, she only talked to 23,
 2 right?
 3 **A. Okay.**
 4 Q. Okay. She never met any of these people;
 5 isn't that right?
 6 **A. I'm not aware of that --**
 7 Q. Okay.
 8 **A. -- okay?**
 9 Q. Do you know how she contacted those
 10 people?
 11 **A. No. I guess I don't.**
 12 Q. Okay. So you don't know that she
 13 contacted them by advertising on anti-wind -- via
 14 anti-wind groups for people who blamed wind farms
 15 for their health issues?
 16 **A. I don't know, no.**
 17 Q. Okay. Pierpont never conducted an
 18 independent medical exam, did she?
 19 **A. Apparently not.**
 20 Q. Okay. Going back to page 10, the
 21 paragraph I looked at before, even she admitted the
 22 limitation of her method, didn't she?
 23 **A. She did.**
 24 Q. And I'll read this for you. "Despite what

Page 1537

1 I see as the virtues of my approach, the study has
 2 clear limitations, one being that it was conducted
 3 entirely by clinical interview over the telephone.
 4 On the one hand this had the benefit of allowing me
 5 to have an international group of subjects. On the
 6 other, it limited the type of data I could collect.
 7 As a result, my ability to say that a certain
 8 symptom during exposure is due to turbines is
 9 confined to medical conditions which are diagnosable
 10 by medical history." Did I read that correctly?
 11 **A. I wasn't reading along, but I will assume**
 12 **it is correct.**
 13 Q. Okay. But are you aware that despite
 14 having said that she didn't even get medical
 15 histories from all the people she talked to?
 16 **A. I'm not aware of that.**
 17 Q. Page 38, Dr. Punch.
 18 **A. I was aware she had data which constitutes**
 19 **a case series.**
 20 Q. Page 38.
 21 **A. Okay.**
 22 Q. Under methods, second paragraph under
 23 methods. "Limited medical records were provided by
 24 the adults of families A and B, (A1, A2, B1, B2) --

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1 that's four people -- and by a young man in family
 2 C, (C4). That totals five people. I requested
 3 records for all families through F, but since no
 4 more were forthcoming, I stopped asking and pursued
 5 those parts of the study not dependent on physical
 6 examination or test results and for which I had a
 7 uniform study tool, the interview." And that was an
 8 interview of 23 people, right?
 9 **A. Okay.**
 10 Q. Okay. Now, you do know that -- even
 11 though you're not an epidemiologist, you do know
 12 that a study like this would normally include both a
 13 target group and control group, right?
 14 **A. Yes, by strict epidemiological rules**
 15 **certainly. I only said that case series was a**
 16 **scientifically valid study because it's acceptable**
 17 **as an observational study.**
 18 Q. Right, but the target and control group
 19 study that I asked you about, which is the normal
 20 method of doing this, that's called a case control
 21 study, right?
 22 **A. Case control.**
 23 Q. Okay, so you have --
 24 **A. Or cohort.**

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1 Q. Cohort is a little bit different, but
 2 we're close enough.
 3 **A. Right.**
 4 Q. So you have a group of people who are
 5 experiencing the subject condition, whatever that
 6 might be, and that's the target group, right?
 7 **A. Right.**
 8 Q. Okay. And then you have a separate group
 9 who aren't experiencing the condition and that's
 10 your control group --
 11 **A. Control.**
 12 Q. -- right? And a qualified doctor would
 13 assess the differences between those two, right?
 14 **A. A doctor and a patient -- patient to a**
 15 **doctor relationship as in a clinic? Or this is**
 16 **research really. I mean it's a kind of research,**
 17 **observational research.**
 18 Q. I'm talking about --
 19 **A. A researcher would make that assessment.**
 20 Q. Exactly, the case control study. An
 21 epidemiologist when you're dealing with health
 22 issues would normally be an M.D., right?
 23 **A. Would normally be an M.D., yes.**
 24 Q. Right. Like Dr. Roberts who's sitting

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1 behind me, right?
 2 **A. Okay.**
 3 Q. Okay. So now there's also a different
 4 type of study called a randomized control trial, an
 5 RCT. You've heard of those, right?
 6 **A. Yes.**
 7 Q. Okay. Would you agree that the RCT is the
 8 gold standard for clinical tests?
 9 **A. Yes.**
 10 Q. Clinical trials.
 11 **A. Certainly I'm not an epidemiologist, but I**
 12 **certainly -- I know they say that and I'm sure it's**
 13 **true. In our own field, we say that as well.**
 14 Q. All right. But as you pointed out,
 15 Pierpont did something called case series, right?
 16 **A. Very different, yes.**
 17 Q. Okay. I'm going to ask -- I'm going to
 18 read you a statement and ask if you agree with it.
 19 In medical research and epidemiology, case series
 20 are considered the weakest form of study because
 21 they have no defined population and no comparison
 22 group. Do you agree with that?
 23 **A. They're weak, yes, relatively weak.**
 24 Q. All right. Second comment. Unlike

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1 studies that employ an analytic design, e.g., cohort
 2 studies, case control studies or randomized control
 3 trials, case series do not in and of themselves
 4 involve hypothesis testing to look for evidence of
 5 cause and effect. Do you agree with that?
 6 **A. I do. They're analytic.**
 7 Q. All right.
 8 **A. They're not analytic, I'm sorry.**
 9 Q. Case series are especially vulnerable to
 10 selection bias.
 11 **A. That's true.**
 12 Q. And internal validity of case series
 13 studies is usually very low due to the lack of a
 14 comparative group or control group exposed to the
 15 same array of intervening variables. Do you agree
 16 with that?
 17 **A. Yes.**
 18 Q. All right. Pierpont did say that she used
 19 target and control groups, right?
 20 **A. She did say she used target and control**
 21 **groups.**
 22 Q. And that's on page 5, the top of the page.
 23 And she says case series don't typically have
 24 control groups, but actually her control group was

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1 the same people as her target group; isn't that
 2 correct?
 3 **A. I don't know that.**
 4 Q. Well, here, it's the top of page 5.
 5 Nevertheless --
 6 **A. I'm not sure how that could be.**
 7 Q. Well, I'm not either, but that's what she
 8 did.
 9 **A. Okay.**
 10 Q. "Nevertheless, I saw I needed a comparison
 11 group of similar, though unexposed people to
 12 distinguish which symptoms were due to turbine
 13 exposure. The most similar unexposed people, of
 14 course, were my study subjects themselves prior to
 15 turbine exposure and after the end of exposure. I
 16 therefore set up a before, during and after study
 17 format interviewing families who had already moved
 18 out of their homes due to symptoms or who were
 19 planning to move and had already spent periods away
 20 from home during which turbine-associated symptoms
 21 abated."
 22 So she used the same people for both the
 23 target and control group.
 24 **A. And that's legitimate in one sense. We**

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1 **call that an ABA group.**
 2 Q. Okay.
 3 **A. ABA study, I'm sorry.**
 4 Q. Right, I understand. You do know that she
 5 didn't interview, much less examine, anyone who
 6 wasn't complaining of effects from wind turbines.
 7 **A. Yes, I've always been aware of that.**
 8 Q. Okay.
 9 **A. I never said that there wasn't weaknesses**
 10 **with her study. I just don't want to discount case**
 11 **series as totally illegitimate.**
 12 Q. I understand what you're trying to do.
 13 And she describes at the -- on page 39 her selection
 14 process, and she didn't select anyone who wasn't
 15 complaining of symptoms.
 16 **A. Right.**
 17 Q. Okay.
 18 **MR. BLAZER:** Mr. Chairman, we're about to
 19 start -- first of all, there's a lot more to go.
 20 I'm about to start another fairly major chunk and
 21 it's almost 9:30, so I'll leave that to you as to
 22 where you want to go. Clearly this witness has to
 23 come back.
 24 **CHAIRMAN CORNALE:** All right. With

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1 probably the quantity of questioning you have, it's
 2 probably not worth getting going. It is 9:23. I
 3 think it's a good opportunity to break for the
 4 evening. I understand Dr. Punch will be back at a
 5 later date. Is that correct, Mr. Luetkehans?
 6 **MR. LUETKEHANS:** We're going to absolutely
 7 try to do that. We have not confirmed that. I
 8 guess I would like for scheduling purposes to
 9 understand, relative to how much Mr. Blazer has
 10 done, how much left he has because obviously I
 11 think --
 12 **CHAIRMAN CORNALE:** That's a fair question.
 13 Mr. Blazer, what's your expectation on length of
 14 questions and what's left?
 15 **MR. BLAZER:** Probably two hours or more.
 16 **CHAIRMAN CORNALE:** Two additional hours.
 17 **MR. LUETKEHANS:** Thought I was windy.
 18 **CHAIRMAN CORNALE:** What's that?
 19 **MR. LUETKEHANS:** Thought I was windy.
 20 **MR. BLAZER:** We're dealing with 75 pages
 21 of presentation, Mr. Chairman. I think you know
 22 what the situation is.
 23 **CHAIRMAN CORNALE:** We understand. Okay.
 24 All right, Mr. Luetkehans, confirm for me, next

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1 week, we have hearings set for the 26th and the
 2 29th.
 3 **MR. LUETKEHANS:** Yes. We have Mr. Gruen,
 4 G-R-U-E-N, coming in on Monday. We're still trying
 5 to figure out if Mr. Rand will be here Thursday or
 6 not depending upon -- I still haven't seen anything
 7 from Mr. Hankard that we talked about last night.
 8 And Mr. Rand has been very unavailable today and
 9 tomorrow, so I will not know that until Monday
 10 afternoon at the earliest.
 11 **MR. BLAZER:** Just on that -- I'm sorry, on
 12 that one issue, Mr. Chairman, the information that
 13 you asked Mr. Hankard to provide by early next week,
 14 Mr. Luetkehans will have it tomorrow.
 15 **CHAIRMAN CORNALE:** Okay, you will --
 16 **MR. LUETKEHANS:** I'm not complaining. I'm
 17 just trying to --
 18 **MR. BLAZER:** I understand.
 19 **CHAIRMAN CORNALE:** Okay. Mr. Blazer, I
 20 appreciate you expediting that process. Okay, Mr.
 21 Luetkehans, you for sure on Monday will have Gruen;
 22 that is correct?
 23 **MR. LUETKEHANS:** Absolutely.
 24 **CHAIRMAN CORNALE:** Okay. Not having a

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1 definitive answer on the 29th, there could be the
 2 opportunity for individuals within the community to
 3 speak. They would be the ones identified on the
 4 list that we have.
 5 So there is -- there is a chance on the
 6 29th that individuals within the community will have
 7 the opportunity to come up and provide testimony.
 8 It will be a testimony-based. Just like these
 9 witnesses are going through, you come up, present
 10 your testimony, we could ask questions, Mr.
 11 Luetkehans, Mr. Blazer, so just so everybody is
 12 clear with that procedure.
 13 Chuck, location of the meetings?
 14 **MR. SCHOPP:** Monday, it's the high school.
 15 **CHAIRMAN CORNALE:** Okay, the 26th, for
 16 everyone, it's at the Pontiac Township High School
 17 at 6:30.
 18 **MR. SCHOPP:** I believe we're back here on
 19 the 29th.
 20 **CHAIRMAN CORNALE:** Okay, and we'll be back
 21 here at the Walton Centre on the 29th at 6:30.
 22 Okay? Okay, I got one question.
 23 Mr. JOHN SLAGEL: When the people give
 24 their testimony then, are we supposed -- if we have

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1 like a chart or something, do we need to bring 15
 2 copies?
 3 **CHAIRMAN CORNALE:** Yeah, if possible, that
 4 would be appreciated. I mean obviously if you want
 5 to explain the chart to us, we need to see it --
 6 **MR. JOHN SLAGEL:** Right.
 7 **CHAIRMAN CORNALE:** -- along with Mr.
 8 Blazer, Mr. Luetkehans. We've tried really hard to
 9 follow through with that. That's why I have a big
 10 box full of paper here. So do your best to get us
 11 the 15, yeah. Anything else?
 12 **MR. JOHN SLAGEL:** If we want to show
 13 something on overhead, we'd have to do that on a
 14 Pontiac night, right?
 15 **MS. FEHR:** No, you can do it here.
 16 **CHAIRMAN CORNALE:** Okay, I have spoke with
 17 the gentleman from here and there is a projector
 18 available here. So certainly if, you know, if -- it
 19 looks like Mr. Luetkehans will know on Monday
 20 whether the individual will be here on the 29th. We
 21 can make arrangements to make sure the projector is
 22 ready to go for anybody to use here on the 29th.
 23 All right?
 24 Okay. The list that we have here of the

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1 individuals that have signed up to speak or present
 2 testimony, we're going to start in chronological
 3 order and we're going to work our way right down the
 4 list. So it's -- it's somewhat imperative that if
 5 we decide on Monday that we're going to take public
 6 testimony on the 29th, that you're here. We won't
 7 make it all the way through the list, I can't
 8 imagine, but be prepared that we may get to you.
 9 All right?
 10 **MR. BLAZER:** Mr. Chairman, just one thing
 11 for Monday. Phil -- I'm too used to calling him
 12 Phil.
 13 **MR. LUETKEHANS:** That's okay.
 14 **MR. BLAZER:** Phil and I talked beforehand
 15 about --
 16 **MR. LUETKEHANS:** I'm not offended.
 17 **MR. BLAZER:** No offense intended. Anyway,
 18 Mr. Gruen we believe between the two of us,
 19 probably, I'm terrible at estimating, but we're
 20 figuring maybe an hour, hour and a half total, so
 21 there may be opportunity Monday as well.
 22 **CHAIRMAN CORNALE:** Okay.
 23 **MR. LUETKEHANS:** I have certain
 24 individuals who want to testify and we may try and

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1 fill that in. I'm not -- I don't want to have an
 2 hour and a half. None of us will have just an hour
 3 and a half. I'm going to try and see if I can
 4 locate some people who are willing to testify on
 5 that particular night Monday to try and get that --
 6 **MR. BLAZER:** My only suggestion is,
 7 regardless of that, I would suggest you put it out
 8 to the public that there may be an opportunity
 9 Monday night as well because I think we're going to
 10 have probably a good hour and a half of dead time
 11 otherwise.
 12 **CHAIRMAN CORNALE:** Well, that might be
 13 welcomed.
 14 **MR. BLAZER:** Touche.
 15 **CHAIRMAN CORNALE:** All right. Let's leave
 16 it as it stands for right now. Mr. Luetkehans, you
 17 have some people identified on this list that you
 18 may be able to put through a series of questions.
 19 **MR. LUETKEHANS:** And some of them honestly
 20 are not on the list. They're just witnesses.
 21 **CHAIRMAN CORNALE:** Okay.
 22 **MR. LUETKEHANS:** So to the extent we can
 23 try and put a couple people in, fill up some time.
 24 I mean, like you, we'd all like to not be doing this

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1 for the next three months.
 2 **CHAIRMAN CORNALE:** Right, agreed. Okay,
 3 with that, I need a motion to recess.
 4 **MR. VITZTHUM:** I make that motion.
 5 **CHAIRMAN CORNALE:** Vitzthum motions. I
 6 need a second.
 7 **MS. IVERSON:** I'll second.
 8 **CHAIRMAN CORNALE:** Diana Iverson seconds.
 9 All in favor?
 10 **ALL MEMBERS:** Aye.
 11 **CHAIRMAN CORNALE:** Opposed?
 12 (Adjourned at 9:29 p.m.)
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1 STATE OF ILLINOIS)
2 COUNTY OF FORD)SS

3
4 I, June Haeme, a Notary Public in and for
5 the County of Ford, State of Illinois, do hereby
6 certify that the following Livingston County Zoning
7 Board of Appeals, Case SU-7-14 hearing was taken at
8 the Walton Centre, 100 West Locust Street, Fairbury,
9 Illinois, on January 22, 2015.

10 That the said deposition was taken down in
11 stenograph notes and afterwards reduced to
12 typewriting under my instruction and that the
13 deposition is a true record of the testimony given.

14 I do further certify that I am a
15 disinterested person in this cause of action; that I
16 am not a relative, or otherwise interested in the
17 event of this action, and am not in the employ of
18 the attorneys for either party.

19 IN WITNESS WHEREOF, I have hereunto set my
20 hand and affixed my notarial seal this 26th day of
21 January, 2015.

22
23

JUNE HAEME, CSR
NOTARY PUBLIC

24
25

26 "OFFICIAL SEAL"
27 June Haeme
28 Notary Public, State of Illinois
29 My Commission Expires:
30 September 27, 2016

31
32
33
34

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