

In The Matter Of:
LIVINGSTON COUNTY ZONING BOARD OF APPEALS

April 27, 2015

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1 LIVINGSTON COUNTY ZONING BOARD OF APPEALS
 2 CASE SU-7-14
 3 PLEASANT RIDGE WIND ENERGY PROJECT
 4 April 27, 2015
 5 6:30 PM
 6 Livingston County Historic Courthouse
 7 112 West Madison Street
 8 Pontiac, Illinois

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1 (Commencing at 6:45 p.m.)
 2 **CHAIRMAN CORNALE:** Chuck, roll call
 3 please.
 4 **MR. SCHOPP:** This is the April 27th, 2015,
 5 continuation hearing of Livingston County Zoning
 6 Board of Appeals review of Livingston County Zoning
 7 Case SU-7-14, Pleasant Ridge Energy, LLC, Pleasant
 8 Ridge Wind Energy Project. Roll call. Michael
 9 Cornale.

10 **CHAIRMAN CORNALE:** Here.
 11 **MR. SCHOPP:** John Vitzthum.
 12 **MR. VITZTHUM:** Here.
 13 **MR. SCHOPP:** Richard Kiefer. Diana
 14 Iverson. Howard Zimmerman. And Joan Huisman will
 15 be here, but she'll be late.

16 **CHAIRMAN CORNALE:** All right. Welcome
 17 everybody here for our 29th meeting. We're gaining
 18 on it. We're doing good. Got a few things that we
 19 need to take care of tonight. We're going to look
 20 at a few exhibits and we're going to look at some
 21 motions that have been presented. There's objection
 22 to the Marcus Maier testimony. We're going to look
 23 at a few other administrative matters.
 24 We discussed at the end of the last

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1 meeting Ms. Severson had a question about an
 2 exhibit. I have been told that the link has been
 3 corrected on the website, so that should be
 4 available for those interested in that.
 5 Next matter, Nelson Zehr exhibit. The
 6 PowerPoint was admitted into the record on March 10,
 7 2015, as UCLC Exhibit 8, so that was taken at the
 8 time we seen it.
 9 For the record, I just want to confirm
 10 that there is no UCLC Exhibit 5.
 11 **MR. LUETKEHANS:** Correct.
 12 **CHAIRMAN CORNALE:** Mr. Luetkehans, can you
 13 confirm that for me please?
 14 **MR. LUETKEHANS:** Correct.
 15 **CHAIRMAN CORNALE:** Okay. All right, Mr.
 16 Luetkehans, can you fill us in on the status of the
 17 Jon Freed letter?
 18 **MR. LUETKEHANS:** You know, we have not
 19 heard anything, so I don't have any update. I can't
 20 really tell you one way or another at this point.
 21 I'm not really expecting much would be my guess.
 22 **CHAIRMAN CORNALE:** Okay, all right, fair
 23 enough. With regard to the next item, it's the
 24 status of the Pleasant Ridge Exhibit 130C, Statement

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1 of Compliance on the A-Design Assessment admitted by
 2 agreement or authenticated by Parzyck.
 3 **MR. LUETKEHANS:** No objection to the
 4 admission of 130C.
 5 **CHAIRMAN CORNALE:** No objection, all
 6 right.
 7 **MR. BLAZER:** For the record, Mr. Chairman,
 8 that's the certificate of design and compliance for
 9 the GE 1.79-100 turbine.
 10 **CHAIRMAN CORNALE:** All right. The county
 11 at this point will accept Pleasant Ridge Exhibit
 12 130C, Statement of Compliance on the A-Design
 13 Assessment.
 14 Expected to be populated on the website
 15 should be a list of interested parties entitled to
 16 make a closing statement. So if you have provided
 17 testimony previously, I guess check the county
 18 website to be certain that you are on that list.
 19 You will have the option to make a closing
 20 statement, to make a closing statement. So just
 21 verify that you are on that list. If for some
 22 reason you're not, let us know and we'll get you on
 23 there. So that's all the administrative things that
 24 we need to take care of.

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1 Okay, let's go ahead and we'll discuss at
 2 this point the Maier testimony. Mr. Blazer, can
 3 you -- can you fill us in on your position with
 4 regards to this, and then we'll allow Mr. Luetkehans
 5 to do the same.
 6 **MR. LUETKEHANS:** Mr. Chairman, can I just
 7 suggest, he's got approximately nine -- eight or
 8 nine items that he's complaining of. I think in
 9 order to better understand this, it would be better
 10 to do this one at a time instead of all eight and me
 11 trying to respond to all eight. I think it would be
 12 a lot cleaner for the board to understand
 13 everybody's position. He's got A through H.
 14 **CHAIRMAN CORNALE:** All right. Yeah, that
 15 seems reasonable, why don't we go ahead with that?
 16 Mr. Blazer, go ahead and --
 17 **MR. BLAZER:** Actually, Mr. Chairman, I was
 18 hoping you would simply -- since you've had my
 19 motion for some time, I was hoping we would just
 20 hear Mr. Luetkehans's response. I'll say it in
 21 general terms.
 22 My motion provides -- as you know, Mr.
 23 Maier testified on the day that you ruled that Mr.
 24 Rand's report would be -- and any testimony

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1 regarding that report would be stricken from the
 2 record. It's -- in our view, it's clear that Mr.
 3 Maier's presentation and testimony were an effort to
 4 circumvent that ruling. Mr. Maier acknowledged both
 5 in his presentation and in his testimony that he is
 6 not an expert in acoustics, he is not an attorney,
 7 he's not an expert in any of the subjects that he
 8 purported to speak about or present about. Yet, he
 9 purported to present the law in Illinois regarding
 10 noise modelling, acoustic issues, all sorts of
 11 things that he clearly wasn't qualified to testify
 12 about, and that because of that, under the rules of
 13 this board, are not relevant to this proceeding.
 14 Specifically, in terms of the -- it's not
 15 just A through H because there are also two other
 16 exhibits that he tried to introduce, but it includes
 17 number 1 or A, if Mr. Luetkehans wants to respond to
 18 that one first, the requirements of Illinois law
 19 regarding what constitutes Class A property and who
 20 has the burden of proof regarding that issue, which
 21 is, per my motion, that's Mr. Maier's presentation
 22 at slide 8.
 23 Phil, you want me to go through all of
 24 them or do you want to respond --

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1 **MR. LUETKEHANS:** I can do them one at a
 2 time I think would be appropriate.
 3 **CHAIRMAN CORNALE:** All right.
 4 **MR. LUETKEHANS:** Let's start with that.
 5 Maier presentation slide 8. Let's look at Maier
 6 presentation slide 8. It's a direct quote of
 7 Illinois Chapter 35, Section 901.102, which has
 8 already been cited and it's actually Exhibit -- and
 9 I don't remember the exhibit, I can find it for you,
 10 but a part of that is an exhibit already that was a
 11 Pleasant Ridge exhibit. Anybody has the right to
 12 put in what a statute says. To say he can't put in
 13 a statute is absolutely ludicrous.
 14 As far as the burden of proof, the law is
 15 clear, he's right, and you're going to hear that in
 16 closing argument, but the burden of proof is on the
 17 applicant. It's a special use. It's their burden.
 18 No matter whether it's noise or anything else, it's
 19 their burden to meet the special use standards. And
 20 that's just Hornbook law in Illinois. It doesn't
 21 take a lawyer, it doesn't take anybody else to tell
 22 you or to say that. It's just a pure statement.
 23 It's a statement of the law.
 24 And the other thing. His quoting from

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1 slide 8, as I said, is right out of the section of
 2 the statute, right out of the statute or the IC --
 3 JCAR regs, the IPCB regs that have been cited and
 4 put before you already and you will be hearing a lot
 5 about over the next several weeks or two weeks,
 6 whatever we have left.
 7 **MR. BLAZER:** Just briefly on that issue,
 8 Mr. Chairman, the specific part of slide 8 that's
 9 the problem is not the fact that Mr. Maier
 10 identified a section of the Illinois IPCB regulation
 11 901.101. You will be hearing about that one from
 12 someone who's qualified to talk about it. The
 13 problem is the statements below that in that slide,
 14 below that citation, where Mr. Maier purports to say
 15 what that section means.
 16 **MR. LUETKEHANS:** Mr. Chairman, that's
 17 actually slide 9, so --
 18 **MR. BLAZER:** I'm looking at slide 8.
 19 **MR. LUETKEHANS:** Well, you can --
 20 **MR. BLAZER:** What part --
 21 **MR. LUETKEHANS:** The pages are numbered,
 22 so I'm responding to the page number slide 8.
 23 **MR. BLAZER:** So am I. Right here. This
 24 one (indicating). And he says, number one, the

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1 entire property of a residence that is only a
 2 residence. What part of a residence that is also
 3 part of a family farm business is excluded from this
 4 Class A classification? And applicant needs to
 5 prove the area of the property that is used solely
 6 for farm business purposes and not used as
 7 residential. All of those are legal conclusions
 8 that he's not qualified to make, so --
 9 **MR. LUETKEHANS:** We have let people
 10 give -- provide opinions throughout this hearing.
 11 He has provided an opinion as to what his belief of
 12 the statute is. It may or may not be right. It's
 13 for this board, the attorneys, for everyone else to
 14 advise this board as to what the proper standard is,
 15 and you'll be hearing about that very much in
 16 closing argument if not before.
 17 So to strike this testimony is, you know,
 18 Mr. -- Mr. Maier had the right to give an opinion as
 19 to this.
 20 **MR. BLAZER:** But the problem is whether or
 21 not Mr. Maier's opinion as a nonexpert regarding
 22 what Illinois law requires is relevant to this
 23 proceeding.
 24 **MR. LUETKEHANS:** It goes to the weight not

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1 the admissibility, Mr. Chairman.
 2 **CHAIRMAN CORNALE:** Okay. Let's take and
 3 go through these and then we'll make a ruling on the
 4 entirety. So next letter.
 5 **MR. BLAZER:** All right. Item B is the
 6 requirements of Illinois law regarding where noise
 7 measurements are to be conducted and the use of 1000
 8 hertz 1 decibel narrowband noise contours.
 9 That's -- and I reference the portion of the
 10 transcript we discussed this, and then there are
 11 three different slides, 9, 11 and 38.
 12 He purports to give not just his opinions
 13 regarding Illinois law but his opinions on
 14 acoustics, where again he's acknowledged that he's
 15 not qualified to give opinions on either one of
 16 those subjects.
 17 And I'll just give one example. Number 9,
 18 it's the first one. Noise level predictions for
 19 Pleasant Ridge are not in compliance with IPCB's
 20 requirement to measure at the property line. He's
 21 purporting to give you an opinion as a nonexpert on
 22 IPCB requirements that measurements occur at the
 23 property line.
 24 **MR. LUETKEHANS:** The measurements for

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1 the IC -- under the IPCB requirements are at the
 2 property line, number one. That is the law. Number
 3 two, all he's saying is noise level predictions for
 4 Pleasant Ridge are not in compliance, and he's
 5 saying that they haven't predicted at the property
 6 line, which is the law. That's clearly the law.
 7 It's any receiving property. It's not this somehow
 8 receptor that's somewhere in the middle of the
 9 property. We've been hearing a lot of testimony of
 10 people living 4 or 500 feet from the property line,
 11 their home.
 12 The law is that. It's a pure statement,
 13 it's a correct statement of the law, and one that
 14 anybody that can read the statute can understand.
 15 It's any receiving land. That's the language.
 16 **MR. BLAZER:** It's actually not any
 17 receiving land, it's any receiving Class A land,
 18 which you'll hear about later this evening from
 19 Mr. --
 20 **MR. LUETKEHANS:** And we all know that
 21 Class A is residential.
 22 **MR. BLAZER:** But in any event, Mr. Maier
 23 is not qualified to testify regarding where you're
 24 supposed to make measurements, how you're supposed

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1 to take measurements, what is or is not in
 2 compliance with the IPCB regulations. That's what
 3 he's purporting to do on these three slides. And
 4 again, as with everything else, it's an effort to
 5 circumvent your ruling with respect to Mr. Rand.
 6 **MR. LUETKEHANS:** You know what? That's --
 7 you have no idea what it's an effort for. You can
 8 say whatever you want, but you don't know what the
 9 effort was for. That's not your position, and if
 10 you want to talk to me about it, that's up to you,
 11 but you shouldn't be saying or this counsel should
 12 not be telling this board what my position is or
 13 what I was attempting to do. That's improper.
 14 **MR. BLAZER:** If we then go to slide 11,
 15 Mr. Chairman, which is the next one that I
 16 mentioned, for example, if you look at the second
 17 bullet, applicant did not provide 1000 hertz 1 dB
 18 narrowband noise contours. No way to prove
 19 compliance at property lines. That's an acoustical
 20 opinion by someone who by his own admission isn't an
 21 acoustician, isn't an expert, can't render an
 22 opinion.
 23 45 residents, 30 of which are
 24 nonparticipants, are predicted at 41 dB in the

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1 predicted sound analysis results, no room for error.
 2 He can't qualify that either. He's not an expert.
 3 **MR. LUETKEHANS:** The "no room for error"
 4 is simple math. We sat here, and in fact Mr.
 5 Griffin in a conversation when he had questions of
 6 Mr. Hankard -- actually Invenergy has pulled back
 7 from 41.4 and 41.5 to 41.0. It's not hard to know
 8 that there's no room for error there. Again, simple
 9 math, simple statements. It doesn't take anybody
 10 with -- a rocket scientist or an acoustician to know
 11 that 41.0 is right on the edge, and that's the
 12 statement that's being made here.
 13 And 45 residents, 30 of which are
 14 nonparticipants, are predicted at 41 decibels.
 15 Again, that's a fact. That's in chart 16B. That's
 16 Pleasant Ridge Exhibit 16B. It's not hard to figure
 17 that out. Count them up.
 18 **MR. BLAZER:** Number one, that's
 19 inconsistent with Mr. Hankard's testimony. Number
 20 two, the point that Mr. Luetkehans just made is that
 21 testimony was the result of Mr. Griffin asking
 22 questions of an acoustician, of an acknowledged
 23 expert, not of someone like Mr. Maier who isn't
 24 either of those.

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1 The same thing goes for slide 38 where he
 2 basically concludes the same thing that he's saying
 3 in 9 and 11, it's just a conclusory kind of wrap-up
 4 of the first two that we talked about, so I think
 5 we've talked this one to death.
 6 **MR. LUETKEHANS:** Well, let me respond.
 7 Let's go through this. The first one on slide 11 or
 8 slide -- I guess it's 11, the IPCB upper limit for
 9 nighttime noise levels is 41 decibels. We've heard
 10 Mr. Hankard testify to that. That's just a
 11 statement of someone else's testimony.
 12 Applicant did not provide 1000 hertz 1
 13 decibel narrowband noise contours. Didn't do it.
 14 We got into it with his cross. He knows how to do a
 15 contour map. He's done it elsewhere. He did
 16 provide it. That's in his cross-examination from
 17 12/15 I think it is.
 18 And then the fact that the rest of them
 19 are duplicative, this is the one that everything
 20 else flows from, and this is all -- this is all just
 21 facts, most of which are already -- 99 percent of
 22 which are already in the record. He can say what's
 23 already in the record. We've had many people
 24 comment on things that are already in the record,

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1 including Ms. Fosdick who is the consultant of
 2 Invenergy.
 3 **MR. BLAZER:** Ms. Fosdick didn't purport to
 4 provide acoustic opinions or --
 5 **MR. LUETKEHANS:** Neither did Mr. Maier.
 6 **CHAIRMAN CORNALE:** All right, why don't we
 7 do this? You get one shot at C and you get one shot
 8 at C.
 9 **MR. BLAZER:** Thank you.
 10 **CHAIRMAN CORNALE:** One time. We're not
 11 going to go back and forth.
 12 **MR. BLAZER:** C is Mr. Maier's comments on
 13 the -- his opinion regarding the propriety of
 14 methodology used by Mr. Hankard and Dr. Schomer for
 15 the California Ridge noise analysis and the context
 16 of using that to validate the Pleasant Ridge model.
 17 That is a pure acoustic opinion which he's not
 18 qualified to make. That's the subject of two
 19 slides, 10 and 12, and portions of the transcript
 20 that I cite.
 21 **MR. LUETKEHANS:** First of all, Mr. -- I
 22 think, if I'm not mistaken, Mr. Ambrose's review is
 23 already in evidence through Mr. Hartke, or at least
 24 it should be, I'm not really sure what happened with

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1 that, but that was brought into evidence by Mr.
 2 Hartke and was allowed to come in.
 3 Measurements were made during mandatory
 4 operation curtailment or harvesting months. That's
 5 just a fact. That's just an absolute fact. And I
 6 think you will find that Hankard's testimony was
 7 consistent with that.
 8 **MR. BLAZER:** The next one is in which he
 9 claimed results of reviews of other operating wind
 10 projects by Rand and Ambrose. And I'll remind you,
 11 Mr. Chairman, this testimony was all a week before
 12 Mr. Hartke testified. And frankly, depending on how
 13 you rule today, that may raise an issue of whether
 14 or not the Ambrose letter, which is also a portion
 15 of Mr. Hartke's presentation, should or shouldn't
 16 remain in the record in this case, but --
 17 **MR. LUETKEHANS:** Mr. Chairman, you already
 18 sustained D. I don't know why we're going over it.
 19 That was already sustained.
 20 **MR. BLAZER:** I wasn't done actually, Phil,
 21 I wasn't done. I haven't interrupted you.
 22 **MR. LUETKEHANS:** What's the --
 23 **MR. BLAZER:** And this board, I'm talking
 24 about slides 15 and 16, you already sustained my

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1 objection when Mr. Maier was testifying to this
 2 material, slides 15 and 16, where he talked about
 3 Rand, Ambrose, and then measured louder than
 4 predicted, and I gave you the transcript citations
 5 where you sustained my objections to these.
 6 **MR. LUETKEHANS:** So I guess I'm at a loss
 7 as to what I'm responding to. Since the objection
 8 was already sustained, it's not in.
 9 **MR. BLAZER:** All right. Well, then I'll
 10 move on.
 11 **MR. LUETKEHANS:** I mean is there some
 12 other part that you're asking to be stricken other
 13 than the two that were already stricken?
 14 **MR. BLAZER:** Not in this one.
 15 **MR. LUETKEHANS:** Okay.
 16 **MR. BLAZER:** Item E, the issue of the
 17 absence of facility design margins which, number
 18 one, is inconsistent with what Mr. Hankard testified
 19 to in January or in December, and that several
 20 residences could be over the IPCB limits. That's
 21 slides 11, 24, 25 and 40, which is a conclusory one,
 22 and I've identified the pages of the transcript
 23 where he spoke about these. These, again, are
 24 purely acoustic opinions by someone who isn't an

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1 acoustician.
 2 **MR. LUETKEHANS:** Okay, let's go through
 3 these one at a time. The opinion that no facility
 4 design margin is included. If you look at Hankard's
 5 testimony in cross-examination, he specifically says
 6 he didn't do that. He goes on to say he did a
 7 conservative analysis so he didn't need to do it,
 8 but he clearly said those exact words on
 9 cross-examination.
 10 Second -- and, Mr. Blazer, you can shake
 11 your head as much as you want, but the record is
 12 what it is.
 13 **MR. BLAZER:** Sure is.
 14 **MR. LUETKEHANS:** And then he goes on to
 15 say no safety margin was stated in the Pleasant
 16 Ridge application. Again, that's the exact same
 17 thing he said in his testimony.
 18 The prediction method used by the
 19 applicant, ISO 9613-2, has a plus or minus 3 decibel
 20 uncertainty out to 1000 meters. Again, that is
 21 direct testimony from Mr. Hankard that he admitted
 22 to in his cross-examination.
 23 Finally, this plus or minus 3 decibel
 24 uncertainty becomes greater when the sound source is

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1 above 30 meters. The turbine hub height is 80
 2 meters. I specifically again asked Mr. Hankard
 3 about this, and he said that that is -- that he said
 4 that the levels that GE puts out are based upon 30
 5 meters. Again, we have this uncertainty. Mr.
 6 Hankard admitted that.
 7 **MR. BLAZER:** Mr. Hankard testified that
 8 the conservative factors utilized -- I'm sorry, I'll
 9 stop.
 10 Item F is slide 28. And again, we have
 11 the meaning and the applicability of Illinois case
 12 law, and again you sustained my objection to that
 13 one, so I guess Mr. Luetkehans doesn't have a
 14 response to that one. But here you go one
 15 additional time where you did sustain my objection
 16 to him purporting to interpret Illinois case law.
 17 Item G is the appropriateness of noise
 18 mitigation measures, including the qualities and
 19 impact of LNTE turbine blades, and that's slides 32
 20 to 34, and again I cited the pages of the
 21 transcript. He can't possibly know what the
 22 qualities or effect of LNTE blades are. He's not an
 23 acoustician, he's not a GE engineer, he has no
 24 qualifications whatsoever.

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1 **MR. LUETKEHANS:** Well, let's talk about
 2 what he is. He's a person who sat and listened to
 3 this testimony. If you look at slide 32, it says
 4 "LNTE blades have not been proven to be a sure
 5 remedy for noise issues." He's correct that that
 6 has not occurred in this case.
 7 He then says -- he then states the
 8 difference, which is Hankard's testimony, and then
 9 he said, as his opinion as a resident, that the
 10 applicant should be required to show reduction in
 11 decibels via comparison documentation between
 12 measured levels. He's saying that they should be
 13 required to. They haven't been required to date.
 14 This board may or may not decide that
 15 they've met their burden, but that's just an opinion
 16 that any person can say you should require that they
 17 do this, you should require they do that. The
 18 residents of this county have the right to tell you
 19 or to tell the county board what they expect out of
 20 the county board.
 21 **MR. BLAZER:** My next one, the next
 22 subparagraph is item H, slides 36 and 42, where --
 23 **MR. LUETKEHANS:** Again, this was
 24 sustained.

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1 **MR. BLAZER:** Again, this was the
 2 relationship between setback distances and noise
 3 levels, which you did sustain. And, again, I
 4 mentioned the ones that you sustained principally to
 5 demonstrate that even though that evening we all
 6 recall went at breakneck speed with a lot of
 7 objections, there was a certain consistency -- yeah,
 8 we all remember that -- to the fact that you did
 9 rule, at least when you had the time to rule, that
 10 he wasn't qualified to render legal opinions and he
 11 wasn't qualified to render acoustical opinions.
 12 That's the point of my pointing out the ones where
 13 you did sustain.
 14 **MR. LUETKEHANS:** If Mr. Blazer would get
 15 to the ones that we're actually ruling on, I would
 16 appreciate it, as I'm sure the board would.
 17 **MR. BLAZER:** And then the next one, which
 18 is paragraph C which also refers -- paragraph 6,
 19 excuse me, relates to the Ambrose letter. As I
 20 point out, you sustained my objection to Mr. Maier's
 21 effort to discuss the subject of slide 17 which
 22 purports to rely on Ambrose for the conclusion that
 23 due to these deficiencies, California Ridge noise
 24 level compliance analysis should not be used to

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1 validate Pleasant Ridge. So that's the same
 2 subject. He can't qualify the Ambrose letter. And
 3 you actually sustained my objection to slide 17
 4 where he tried to do that.
 5 Paragraph 7 --
 6 **MR. LUETKEHANS:** Well, let's talk about, I
 7 mean just because you're still on paragraph 6, the
 8 slides 12 and 13 and 14 are the same argument I've
 9 already made, so I won't repeat that.
 10 **MR. BLAZER:** They're 17 and 39, Phil.
 11 **MR. LUETKEHANS:** And 17 you've already
 12 sustained, right? So why are we dealing with that?
 13 And conclusion -- 38 is the conclusion, summary of
 14 what I am saying. He's saying in his opinion they
 15 have not met their burden of proof in demonstrating
 16 compliance with the law. He's allowed that opinion
 17 based on the evidence that's before us.
 18 **MR. BLAZER:** Well, actually 39 says
 19 "Applicant appears to have withheld pertinent
 20 information that has high probability to prove
 21 noncompliance with Illinois law." That's an expert
 22 conclusion by a nonexpert. It's also contrary to
 23 the others in this case.
 24 Paragraph 7 --

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1 **MR. LUETKEHANS:** He has the absolute right
 2 to say that he believes you withheld pertinent
 3 information.
 4 **MR. BLAZER:** We move on to paragraph 7 and
 5 I point out the issue of the Ambrose letter is
 6 identical to the issue of the Rand report. Mr.
 7 Ambrose hasn't testified, isn't going to testify --
 8 **MR. LUETKEHANS:** Why are we dealing with 7
 9 at this point when you've already sustained it as it
 10 relates to Maier's testimony? If he's going -- if
 11 he wants to file a motion to Hartke, he should file
 12 a motion to Hartke.
 13 **MR. BLAZER:** Except --
 14 **MR. LUETKEHANS:** You can't backdoor this
 15 in.
 16 **MR. BLAZER:** Because this hasn't been
 17 ruled on yet. The question of the Ambrose letter
 18 itself hasn't been ruled on yet, and Mr. Maier
 19 purported to rely on a letter from a purported
 20 expert who hasn't testified and won't, and it's the
 21 identical situation as with Rand. Rand didn't
 22 testify; you struck his report. Ambrose isn't
 23 testifying; you should strike his letter.
 24 Then paragraph 8 is the Harrison article.

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1 **MR. LUETKEHANS:** Can I respond to that?
 2 **MR. BLAZER:** I'm sorry.
 3 **MR. LUETKEHANS:** In fact, Chairman Cornale
 4 at the hearing, in order to be consistent, if it's
 5 the one I'm thinking about, "we'll consider the
 6 weight of this evidence in our decision and will
 7 allow it." So it goes to weight. You've already
 8 ruled on that. This isn't a motion to reconsider.
 9 This is a motion to strike certain exhibits that
 10 weren't ruled upon.
 11 **MR. BLAZER:** I -- that transcript
 12 reference doesn't relate to this. Then finally
 13 paragraph 8 is Maier's reliance on the Harrison
 14 article from 2011.
 15 **MR. LUETKEHANS:** I'm sorry, that's the one
 16 that was already ruled upon.
 17 **MR. BLAZER:** I don't believe it was, but
 18 the Harrison article is again somebody's opinion
 19 regarding acoustics who isn't going to testify in
 20 this proceeding. If Mr. Maier were an expert, and
 21 this is one of the -- in this proceeding, one of the
 22 few things that Phil and I agree on. If Mr. Maier
 23 was an expert and he was going to show you an
 24 article from someone in their field, clearly he

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1 could do that. Absolutely. No doubt whatsoever.
 2 The problem is he's not an acoustician and
 3 he's trying to present to you an opinion from
 4 someone who wrote -- someone who happens to be, say,
 5 on the board of directors of the Society for Wind
 6 Vigilance, which is in the record -- an opinion
 7 regarding acoustics. He can't do that. If Rand was
 8 here, he could have done that. If Ambrose was here,
 9 he could have done that. Mr. Hankard's here and
 10 could theoretically do that, but Mr. Maier can't.
 11 **MR. LUETKEHANS:** Okay, I have a few things
 12 to say about that. One, page 2976 of the transcript
 13 says, when Mr. Blazer's objecting to the Ambrose --
 14 or he's objecting to a document, California Ridge --
 15 related to California Ridge, the chairman says,
 16 "Neither of these speaks specifically to the
 17 Pleasant Ridge wind project, so on the same basis
 18 that we accepted your motion earlier, we have to
 19 deny your objection at this point."
 20 Then we go on to page 2985 and say we'll
 21 consider the weight of this evidence -- this is
 22 Exhibit 132 which is the Harrison report. "We'll
 23 consider the weight of this evidence, Exhibit 132,
 24 in our decision, and we'll allow it at this point."

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1 Further, just as an overall, on page 2973,
 2 Chairman Cornale gave the statement, "This is an
 3 opinion and it's regarding what is Class A property.
 4 Mr. Maier can have an opinion on this, so we'll
 5 allow it."
 6 **MR. BLAZER:** Page 2973?
 7 **MR. LUETKEHANS:** Yes.
 8 **MR. BLAZER:** The pages I'm looking at, the
 9 pages that we cite for everything we're talking
 10 about tonight are in the --
 11 **MR. LUETKEHANS:** It's a general statement.
 12 **MR. BLAZER:** -- 1400s.
 13 **MR. LUETKEHANS:** It's a general statement.
 14 What? I don't know what you're looking at, but the
 15 exhibit I -- the ones that I have start at 2900 --
 16 **MR. BLAZER:** I'm sorry.
 17 **MR. LUETKEHANS:** 2967 it starts.
 18 **MR. BLAZER:** You're correct, I'm sorry. I
 19 was looking at paragraph -- I think we've said
 20 enough, Mr. Chairman. I think at this point we
 21 would really like to get a ruling so we can move on
 22 with the witnesses.
 23 **CHAIRMAN CORNALE:** Okay. All right. We
 24 have heard both sides of this. I guess where we're

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1 at, to be certain as we move forward with this that
 2 this testimony hasn't already been stricken and --
 3 we need to have this legally reviewed on both sides
 4 of me here. I have some preliminary thoughts on it,
 5 but at the same time, if I've already -- if I've
 6 already allowed or not allowed certain portions,
 7 then I'm going to be going back on earlier
 8 decisions, and I want this -- I want these decisions
 9 to be consistent with previous decisions.
 10 The only way we're going to get that
 11 sorted out is if we dig deeper into the transcripts.
 12 Mr. Blakeman has alluded that he can do that for me.
 13 Because we -- because it was just one after the
 14 other objection, there was some that we ruled, some
 15 that we didn't, and we really need to be clear on
 16 what we have and have not.
 17 So we will -- we've taken both sides, the
 18 discussion about it is over, and I feel certain that
 19 by the next meeting we can have a, kind of a
 20 decision made regarding portions. The way I see it
 21 now is parts will be allowed and parts will be
 22 denied. So to allude to those parts, I can't do
 23 that right now. So --
 24 **MR. BLAZER:** What I'd like to do then, Mr.

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1 Chairman, and I understand completely, and I
 2 discussed this with Tom, with Mr. Blakeman. Because
 3 we didn't know how you were going to rule, I have
 4 Mr. Hankard prepared to either respond or not
 5 respond to the Maier presentation.
 6 What I propose is he respond to the Maier
 7 presentation just so we don't have to bring him back
 8 again, but that wouldn't be a waiver of all of the
 9 objections I have, and at the end of the day, if
 10 there are certain portions that you agree with me
 11 on, we'll just strike all of that, and so that way
 12 at least we can get everything in, then you can deal
 13 with it on Wednesday. Does that --
 14 **CHAIRMAN CORNALE:** That seems -- that
 15 seems reasonable. I mean it was similar to what we
 16 let Mr. Maier do actually, I mean proceed with his
 17 comments, and then we kind of advised him that we
 18 may possibly strike some of it. So, okay, that
 19 seems reasonable. So let's --
 20 Mr. Luetkehans, is that -- does that seem
 21 fair or consistent?
 22 **MR. LUETKEHANS:** Yeah, and I guess I will
 23 -- yeah, I don't have a problem with if this board
 24 later -- I mean obviously I disagree with any

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1 striking of this, but if the board takes this under
 2 advisement and strikes it later or decides whatever
 3 it does later, that's acceptable, that's fine.
 4 **CHAIRMAN CORNALE:** All right, certainly in
 5 an effort of keeping the evening moving along. I
 6 can see you guys could discuss this for several
 7 hours.
 8 **MR. BLAZER:** Not us.
 9 **CHAIRMAN CORNALE:** All right. What we're
 10 going to do now is I promised everyone we were going
 11 to -- there were some additional questions of Mr.
 12 Hankard. We were going to have Mr. Hankard come
 13 forward. We were going to have some questions of
 14 him. I think everybody maybe has some additional
 15 questions of him.
 16 **MR. BLAZER:** If I may, Mr. Chairman, what
 17 I was going to do, I actually had Dr. Roberts teed
 18 up to go first, and then -- if you'd rather do the
 19 direct of Hankard first, he can certainly do that.
 20 **CHAIRMAN CORNALE:** Yeah, I think more
 21 important is in the whole process --
 22 **MR. BLAZER:** That's fine.
 23 **CHAIRMAN CORNALE:** -- so that we can -- we
 24 can say, okay, we're done with that portion and

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1 we're moving to rebuttal, and then we'll explain all
 2 the rules.
 3 **MR. BLAZER:** Okay by me.
 4 **CHAIRMAN CORNALE:** Mr. Hankard, come on
 5 up. All right, Mr. Hankard, I just want to remind
 6 you that you are still -- you've been previously
 7 sworn in, you're under oath, so I guess we'll work
 8 our way through our normal order for questions, and
 9 we may -- we will continue to reserve the right. We
 10 may allow some others to ask some questions.
 11 **MR. BLAZER:** If I can ask, Mr. Chairman --
 12 **CHAIRMAN CORNALE:** Yes.
 13 **MR. BLAZER:** -- my understanding from the
 14 transcript when we decided to defer him to a later
 15 date --
 16 **CHAIRMAN CORNALE:** Right.
 17 **MR. BLAZER:** -- was it was with respect to
 18 Pleasant Ridge Exhibit 16A and 16B which are the
 19 list of -- the new list of LNTE blades, the list of
 20 model runs.
 21 **CHAIRMAN CORNALE:** Okay.
 22 **MR. BLAZER:** And then there was also the
 23 ISO standard that he had referred to that day. This
 24 was back in January. That those were the three

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1 specific subjects that, I believe Mr. Luetkehans
 2 agrees with me, we discussed it last week, that were
 3 what was reserved the last time Mr. Hankard was
 4 here.
 5 **CHAIRMAN CORNALE:** Okay, all right.
 6 **MR. BLAZER:** And I have copies of those if
 7 you need them.
 8 **CHAIRMAN CORNALE:** Sure. Okay, we will --
 9 okay, Mr. Luetkehans, Mr. Blazer alluded that you
 10 have previously spoke about that. Is that a correct
 11 statement?
 12 **MR. LUETKEHANS:** We have spoken a number
 13 of times, it's never been quite that clear, but I
 14 don't think we're going to -- I don't think we're
 15 going to get into a fight about that here in the
 16 next five minutes when we do this.
 17 **CHAIRMAN CORNALE:** All right. I guess I
 18 would like to stress to the audience that you will
 19 have the opportunity to further question Mr. Hankard
 20 too. You will need to try to address your questions
 21 with regard to these particular exhibits. I believe
 22 one had to do with the LNTE blade configuration,
 23 some ISO standards, and the third one was some model
 24 runs on the LNTE blades.

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1 All right. With that, ZBA, do we have any
 2 questions at this point?
 3 **MS. HUISMAN:** I don't.
 4 **CHAIRMAN CORNALE:** Okay. The ZBA, just as
 5 a reminder to everyone in the audience and Mr.
 6 Blazer and his witnesses, we continue -- throughout
 7 these proceedings, we continue to reserve the right
 8 to ask questions of any exhibit, any information of
 9 any witness with no limitation to our question
 10 range, just so we're all clear on this.
 11 All right, I'll call them in order. Units
 12 of local government or school districts? All right.
 13 **MR. LUETKEHANS:** Mike, did you give him
 14 two or three exhibits?
 15 **MR. BLAZER:** Two.
 16 **MR. LUETKEHANS:** Oh, you're not giving him
 17 the third one, the ISO standard?
 18 **MR. BLAZER:** Oh.
 19 **CHAIRMAN CORNALE:** All right, Mr.
 20 Luetkehans, are you ready to go with your questions?
 21 **MR. LUETKEHANS:** Sure, let me just --
 22 **MR. BLAZER:** Let me see if I have that.
 23 **QUESTIONS BY**
 24 **MR. LUETKEHANS:**

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1 389, 396, 438, 439, 484, 502 and 748. If my math is
 2 right, that's 15, correct?
 3 **A. Sure. I didn't follow you to every one,**
 4 **but I --**
 5 Q. Okay, well, those are the ones that are --
 6 **A. I'm fine --**
 7 Q. -- nonparticipants, correct?
 8 **A. -- with that.**
 9 Q. Okay. Now, let's go to the next two pages
 10 which you might -- here's my back, front and back,
 11 so I don't know how yours are set up. This is the
 12 GE 1.72-103 turbine model for four LNTE turbines,
 13 correct?
 14 **A. Yes.**
 15 Q. Okay. Using this model, this chart, we
 16 have again 25 participating and nonparticipating
 17 residents that are at 41.0 and above decibels at the
 18 nighttime level at 1000 hertz, correct?
 19 **A. Again, without checking, I will assume**
 20 **that that's correct.**
 21 Q. Okay. And would you also assume that 16
 22 of these are nonparticipants?
 23 **A. Same response.**
 24 Q. Okay. And these levels were all measured

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1 Q. Okay, if you can look at -- do you have
 2 16B in front of you, Mr. Hankard? Have they given
 3 you that or not?
 4 **A. I do.**
 5 Q. Okay. 16B, the first and second page, is
 6 with the 11 LNTE turbines, correct?
 7 **A. Correct.**
 8 Q. Okay. And with using the 11 LNTE turbines
 9 and the GE -- and that's the GE 1.79, correct?
 10 **A. The first two pages are the 1.79-100**
 11 **turbine.**
 12 Q. That's where we're going to stay for a
 13 couple minutes. We have 25 participating and
 14 nonparticipating residents there at 41.0 and above
 15 decibels at the nighttime level of 1000 hertz on
 16 that chart, correct?
 17 **A. I will trust your math. You said how**
 18 **many?**
 19 Q. 25.
 20 **A. 25. I certainly see something on that**
 21 **order, sure.**
 22 Q. Okay. Of that 25, approximately 15 of
 23 these are nonparticipants, correct? I'll just go
 24 through them, 5, 92, 243, 270, 313, 329, 345, 388,

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1 at the residence, correct?
 2 **A. Well, not measured of course but**
 3 **predicted.**
 4 Q. Modelled at the residence.
 5 **A. Modelled, yes.**
 6 Q. And previous to this exhibit that we
 7 received for the first time on January 21st, these
 8 were all listed in the prior documents given to this
 9 board as 41 decibel level, correct? If it was 41.0
 10 to 41.5, it was listed as 41, correct?
 11 **A. No, it was 40.0 -- or, excuse me, 41.0 to**
 12 **41.4.**
 13 Q. Okay, I'm mistaken. Okay. Now, let's go
 14 to the fifth page. It says 100 meter blades, do you
 15 see that? Actually it says -- 100 meter blades, I'm
 16 sorry. This is really small.
 17 **A. Yes, I produced it, sorry about that.**
 18 Q. That's okay, I -- you know, I strained a
 19 little, but I got through it, how's that?
 20 **A. Okay.**
 21 Q. This is what exactly just for the record?
 22 **A. All right. So this is the next step, if**
 23 **you will, from these first tables that we just went**
 24 **over when the board had concern about the --**

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1 **anything that was 41.1 to 41.4. So we went and**
 2 **added additional LNTE turbines to the model which**
 3 **brings the levels down, so these are the now**
 4 **predicted levels whereas no participating or**
 5 **nonparticipating residence has a 1000 hertz noise**
 6 **level at 41.0 or, excuse me, greater than 41. -- or**
 7 **greater than 41.0.**
 8 Q. Okay. And there are exactly -- there are
 9 five that are exactly at 41.0, correct?
 10 **A. Yes.**
 11 Q. And then there's another 32 properties
 12 between 40.5 and 40.9, correct?
 13 **A. I have not done that math, but --**
 14 Q. Would you assume that I'm correct?
 15 It's --
 16 **A. I can, subject to check, certainly assume**
 17 **that.**
 18 Q. Okay. Then the next chart is the same
 19 thing as page 5 except for it's 103 meter blades,
 20 correct?
 21 **A. Yes.**
 22 Q. And again, here we have five properties
 23 exactly at 41.0 decibels at the nighttime level for
 24 1000 hertz, correct?

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1 **A. Yes.**
 2 Q. And would you also take my word that there
 3 are 29 properties between 40.5 and 40.9?
 4 **A. Subject to check, yes, I will.**
 5 **MR. LUETKEHANS:** Nothing further.
 6 **CHAIRMAN CORNALE:** All right. Members of
 7 the audience, anybody have questions for Mr.
 8 Hankard, certainly with regard to these three
 9 exhibits that we've discussed? Anybody in the
 10 audience? Oh, I have one.
 11 **MR. HAYES:** Yeah, just a real quick
 12 question and it deals with the rounding.
 13 **QUESTIONS BY**
 14 **MR. HAYES:**
 15 Q. The 41.0, I'm sure the equation calculated
 16 a number after the zero. How did you determine that
 17 it -- was anything that was 41.01 would be
 18 considered over or did you round that also?
 19 **A. Well, the sound software itself is**
 20 **configured to round or to give its results to**
 21 **one-tenth of a decibel, so -- a decibel. So it**
 22 **spits out 41.0. So we did not do any additional**
 23 **rounding ourselves. That was done within the**
 24 **software I guess.**

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1 Q. So you don't know if the software's
 2 truncating or rounding.
 3 **A. Not off the top of my head I do not know.**
 4 **I would assume -- well, the data from GE is given --**
 5 **the power level data that the model receives is to a**
 6 **tenth of a decibel, so there's really no rounding**
 7 **that goes on. The data that you input is to a tenth**
 8 **of a decibel and the data that you receive is to a**
 9 **tenth of a decibel, so there's no rounding that**
 10 **occurs.**
 11 Q. Well, that can be a little misleading
 12 based on significant figures there. So if you're
 13 putting in -- even though it may go to a tenth, if
 14 it's got a five significant figure input into the
 15 equation, you should be able to get a five
 16 significant figure out of it?
 17 **A. Right, but that's why people were only**
 18 **putting in one, so we can only get out one, because**
 19 **this whole processes starts with the data that we**
 20 **get from GE.**
 21 Q. Right, but you're putting in more than one
 22 significant figure.
 23 **A. No, we don't. That's --**
 24 Q. If you're only putting in one significant

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1 figure, your answer would be to one significant
 2 figure, then you're limited to numbers like 10, 20,
 3 30, 40.
 4 **A. Oh, I'm sorry.**
 5 Q. You must be --
 6 **A. When you said one significant figure, I**
 7 **thought you meant to a tenth of a decibel.**
 8 Q. Well, you're not -- unless I misunderstood
 9 that equation when I looked at it, it -- you know,
 10 at someplace in there, if it's going to calculate a
 11 decimal number, then somebody has to program it to
 12 either truncate, which means just drop the next
 13 number, or it's going to tell it to round, and I'm
 14 just wondering what it did. You know, it's kind of
 15 splitting hairs, it's a rather small little bit, so
 16 I'm just curious as to what it was. But I think you
 17 answered my question though, thank you.
 18 **CHAIRMAN CORNALE:** Any other questions
 19 from the audience? Anybody else out there? All
 20 right. Back to the ZBA, do we have anything?
 21 **MS. HUISMAN:** Yes.
 22 **CHAIRMAN CORNALE:** All right.
 23 **QUESTIONS BY**
 24 **MS. HUISMAN:**

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1 Q. Joan Huisman, Mr. Hankard. Did I
 2 understand you correctly that the pages that are
 3 very, very small print are the result of applying
 4 LNTE blades to those turbines in your model that
 5 were over the limit?
 6 **A. Well, no one turbine is necessarily over**
 7 **the limit. If I have a residence anywhere in the**
 8 **project, it might have one or two or three or four**
 9 **turbines that are influencing the total noise level**
 10 **at that residence. So if I want to reduce the**
 11 **predicted level at that residence, I need to choose**
 12 **one or more of these turbines to convert from a**
 13 **standard turbine to an LNTE turbine.**
 14 Q. So if I just look at the first turbine
 15 that's listed on any one of these pages, it's 005 --
 16 **A. Well, those aren't turbines, those are the**
 17 **residences.**
 18 Q. Those are receptors, okay.
 19 **MR. BLAZER:** Ms. Huisman, just for the
 20 record, the list of additional turbines is Exhibit
 21 16A.
 22 **MS. HUISMAN:** Okay, thank you.
 23 **MR. SLAGEL:** Where is this exhibit with
 24 one decimal point that you're all talking about? Is

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1 it on the website? Can I see it?
 2 **CHAIRMAN CORNALE:** All right, yeah, these
 3 are -- these are on the website. 16B, Pleasant
 4 Ridge Exhibit 16B. They have been previously
 5 submitted and accepted.
 6 **BY MS. HUISMAN:**
 7 Q. Okay, so if our numbers here at the 1000
 8 hertz band are still at 41 and that's measured at
 9 the residence not at the property line, are you --
 10 are you familiar with the Illinois law regarding
 11 sound requirements?
 12 **A. Absolutely.**
 13 Q. Class A property is, in your definition,
 14 what?
 15 **A. Class A property is listed in the LBCS**
 16 **code, the land use code, in the regulation as a**
 17 **household. That is the verbatim language from the**
 18 **regulation.**
 19 Q. And where does the measurement need to be
 20 taken for Class A property?
 21 **A. Well, Class A property is the household**
 22 **and at the household.**
 23 Q. Class A property doesn't include the
 24 entire parcel? So my parcel might include Class A

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1 is my house, and the yard surrounding it is a
 2 different class?
 3 **A. Correct.**
 4 Q. That's your interpretation?
 5 **A. Yes.**
 6 Q. Okay. So that's how you interpret that
 7 the measurement can be made at the foundation of the
 8 home or residence to the turbine itself.
 9 **A. Correct.**
 10 Q. A turbine, how do we determine like what
 11 property that is? I mean are you measuring from
 12 what --
 13 **A. The model assumes the turbine is a point**
 14 **at the top of the tower, at the nacelle, the hub of**
 15 **the turbine.**
 16 Q. Okay.
 17 **A. That's where it assumes the noise is**
 18 **coming from.**
 19 Q. Okay. How do -- can you explain how these
 20 LNTE blades -- is it possible to reduce the effects
 21 of the sound at any of these residences? It seems
 22 like this is a hot issue for this -- for any wind
 23 farm. So how cost prohibitive is it for LNTE blades
 24 or what do -- what exactly is added to the blade

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1 that reduces the sound that comes off of that?
 2 **A. It is the shape of the blade, so the**
 3 **trailing edge of the blade has serrations. It's**
 4 **actually modelled after an owl's wing. Noticed that**
 5 **owls have serrations and their flight is very quiet,**
 6 **and that led researchers literally to come up with**
 7 **this design of a serrated, looks like a bread knife**
 8 **kind of, on the back edge of the blade, and that**
 9 **allows the air flow to be -- to create less**
 10 **turbulence on the trailing edge. That allows the**
 11 **turbine to capture the same amount of energy but**
 12 **create less noise doing so.**
 13 Q. So once a turbine is constructed and it's
 14 up and operating and it's causing an issue at a
 15 nearby residence, can that low noise trailing edge
 16 be added after construction?
 17 **A. Yes, you can swap blades out on turbines.**
 18 Q. It's just a blade swap; it's not something
 19 you add to the current blade?
 20 **A. I'm not a turbine blade engineer, but I'm**
 21 **pretty sure you'd have to swap the blades out. That**
 22 **would be a question for -- definitively for someone**
 23 **else, but I'm pretty sure you have to swap the**
 24 **blades out.**

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1 Q. Okay.

2 **MS. HUISMAN:** Nothing else right now.

3 **QUESTIONS BY**

4 **CHAIRMAN CORNALE:**

5 Q. All right, Mr. Hankard, I have a couple

6 questions. You alluded to 16B and this really small

7 writing as these were your models?

8 **A. Yes.**

9 Q. Okay. Previously your testimony was based

10 upon a report given to you by?

11 **A. JoAnne Blank.**

12 Q. From?

13 **A. Stantec.**

14 Q. Stantec, okay, okay. Did you -- as you

15 looked at this and produced these results in 16A --

16 or 16B, sorry, did you entirely start the model new

17 or did you assert given things from her model or her

18 report and input those into your new data?

19 **A. Right. No, these final results that you**

20 **see in the small print, the rounded or nonrounded**

21 **results if you will, were produced in the same**

22 **manner. JoAnne Blank ran the software, but I**

23 **dictated everything about how that model was set up.**

24 **I oversaw the QA, the quality assurance of that by**

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1 **comparing it with some of my spreadsheet**

2 **calculations as well as having another office at**

3 **Stantec run a different model, you know, same**

4 **inputs, same algorithms but different software, so**

5 **we really checked it three different ways.**

6 **So the results come from JoAnne Blank**

7 **running this Wind Pro software, but I had everything**

8 **to do with overseeing how that was done and then**

9 **afterwards checking it to make sure that I agreed**

10 **with the results.**

11 Q. Okay, but you -- you physically yourself

12 did not input, input this data. It was a -- you

13 handed this job off to someone else?

14 **A. Well, I don't like that terminology.**

15 **Handing it off kind of means, here, you do it, I'm**

16 **not involved. No, I'm the quarterback. I am**

17 **responsible for these numbers and for everything in**

18 **the way that they were put together. And, for**

19 **example, with inputting the data into the model, I**

20 **have JoAnne spit that out of the model so I can see**

21 **exactly what she put in. I don't have to take her**

22 **word for it; it's there on the output of the model.**

23 **I can double-check, yes, okay, she put in what I**

24 **asked her to put in and then we get the results that**

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1 **we get.**

2 Q. Okay. All of the results that are shown

3 in the chart on 16B, they are, would it be fair to

4 say, the expected worst possible -- the loudest

5 possible readings or are these constant readings?

6 **A. No, these in my personal opinion**

7 **absolutely represent the maximum levels that you**

8 **will ever see, and actually these are upwards of 2**

9 **dB greater I believe at 1000 hertz. That, you know,**

10 **if we build this project and someone goes out and**

11 **measures, I am a hundred percent confident you will**

12 **see lower than these levels, and that's if you --**

13 **I'm talking if you measure over the course of days**

14 **and weeks and months, which is sometimes required in**

15 **these projects. You can't go out on any given**

16 **afternoon and night and say this is what it is**

17 **because conditions change and you need to collect a**

18 **reasonable sampling of those conditions.**

19 Q. So they make this level if they're

20 averaged.

21 **A. No. Again, these are the levels that I**

22 **would expect, for example, with the turbines running**

23 **full capacity and with the atmospheric conditions**

24 **conducive to sound getting from the turbines to**

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1 **wherever I'm measuring, so downwind, maybe a**

2 **temperature inversion, at nighttime, you know, the**

3 **worst case.**

4 Q. Okay, and you -- as you stated there,

5 you've possibly added a 2 dB buffer.

6 **A. Where that comes from, why I say that, is**

7 **because -- so on California Ridge, we measured for**

8 **four months. We know, okay, we measured at -- the**

9 **loudest that we measured is 39 decibels in the 1000**

10 **hertz band. I built a model of that very project in**

11 **a completely similar way to the way I built the**

12 **model for Pleasant Ridge, and I predicted out my**

13 **measurement locations and it predicts a 41. So, in**

14 **other words, it predicted a 41 and I measured a 39,**

15 **so my model is 2 dB high.**

16 **So I used those same exact methodology, I**

17 **apply that to Pleasant Ridge, so I expect you to be**

18 **2 dB high here as well in the 1000 hertz band.**

19 Q. Okay. All right. Professionally, in your

20 opinion, you feel that this adequately represents

21 the worst expected outcome, possibly a 2 dB buffer,

22 is that what I take from what I'm hearing?

23 **A. That is exactly correct.**

24 Q. Okay. All right.

1 **CHAIRMAN CORNALE:** Anything else come up?
2 John, did you have anything?

3 **QUESTIONS BY**
4 **MR. VITZTHUM:**

5 Q. When you talk about 1000 hertz band, is
6 that -- if you're further away, like what if you're
7 measuring residence A at, say, a quarter of a mile
8 away? Could it be louder at one and a half miles
9 away?

10 **A. No, it's -- sound diminishes with**
11 **distance, and in addition, the atmosphere eats away**
12 **at the sound level as well with distance, so there's**
13 **no question that the level will be less loud the**
14 **further away you are.**

15 Q. Okay, is it louder downwind or upwind from
16 -- is that the kind of conditions or what?

17 **A. Well, there's two parts to that. When**
18 **you're very close -- I've been very close to a**
19 **turbine, very close as in a couple hundred feet, and**
20 **I've taken measurements all the way around. And**
21 **what you find is it's about the same upwind as**
22 **downwind, so the turbine is putting out almost as**
23 **much noise in either direction.**

24 **But now when you talk about being at the**

1 **expect that to be -- get, you know, louder and then**
2 **quieter and then louder as you move down.**

3 Q. Okay, but I guess if you're measuring 1000
4 hertz, then my question to you is what in the world
5 am I hearing?

6 **A. If you're three and a half miles away, I**
7 **mean the atmosphere tends to take up that higher, so**
8 **the further away you go, you're left with the lower**
9 **frequency sounds.**

10 Q. So the chance is somebody being closer,
11 that they're not going to get that?

12 **A. I'm afraid I don't understand that.**

13 Q. Well, you said if I'm -- it's going to be
14 easier to hear further away. Is that ever going to
15 happen when you're closer? I mean the noise I hear
16 at three and a half miles away would drive me nuts
17 if I was a quarter of a mile away, so I guess I mean
18 how come your tests don't pick none of that up?

19 **A. I'm sorry, I'm struggling, I don't -- I**
20 **don't understand your question.**

21 Q. I mean if I look -- you say none of this
22 should bother anybody. I'm saying that that sound
23 does bother people. Why don't your models pick
24 anything up that would bother a person?

1 **distance that the residences typically are, 17, 1800**
2 **feet, 2,000, 3,000 feet, what have you, now the**
3 **atmosphere starts to take over, and then in that**
4 **case, yes, it's -- you know, when you're downwind of**
5 **the source, it's going to be louder.**

6 Q. And the reason I ask that, I'm three and a
7 half miles from a windmill and I can hear it. And I
8 hear it worse when it's blowing away from me.

9 **A. That does -- that does not make sense to**
10 **me as an acoustician based on what I know --**

11 Q. And --

12 **A. -- with all due respect.**

13 Q. Well, that's okay. With all due respect,
14 it woke my wife up and I'll have you argue with her,
15 I ain't going to argue with her. And that's why I
16 asked because is there chances of it being louder
17 three miles away versus half a mile away or 80 yards
18 away?

19 **A. There are some atmospheric conditions that**
20 **could occur. You can get -- but that's usually only**
21 **with very low frequencies, this is more of this**
22 **infrasound which we've been discussing here, but**
23 **with the sound that you hear, the 1000 hertz, no,**
24 **there would never really be a case where you would**

1 **A. Well, my model doesn't predict whether it**
2 **bothers anybody. It predicts what the levels are**
3 **and --**

4 Q. So what level bothers a person I guess is
5 what I'm asking. Why do you go at 1000 hertz? What
6 level would bother a person?

7 **A. Well, the reason we go at 1000 hertz is**
8 **because that's what the -- drives the regulatory**
9 **compliance on this project. That's the number that**
10 **hits closest to the limit, so that's why we're**
11 **talking about 1000 hertz, but of course we predicted**
12 **all across the frequency spectrum.**

13 **MR. VITZTHUM:** I don't have any more
14 questions.

15 **CHAIRMAN CORNALE:** County staff or county
16 counsel? Changing up on me here. All right, Mr.
17 Hankard --

18 **MR. CAVAZOS:** May I ask a question? He
19 testified to something after you asked people --

20 **CHAIRMAN CORNALE:** No, no, those were
21 questions that we had, so he answered those
22 questions, so unfortunately you missed your
23 opportunity to ask a question.

24 All right, Mr. Hankard, you can go ahead

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1 and sit down and we'll -- tell you what. Let's --
 2 let's talk about this rebuttal and we can talk about
 3 that portion of the hearing, and then we'll take a
 4 little bit of a break after we talk about that, and
 5 if there's some questions, you guys can come up and
 6 I'll let you guys talk to counsel on both sides and
 7 try to work through those if there are any
 8 questions.
 9 So we worked on some rules. I have them
 10 in front of me. I think I'll go through them and
 11 read them. We'll kind of further explain as we go
 12 through. All right, I'll let Mr. Blakeman read
 13 them.
 14 **MR. BLAKEMAN:** Procedures for rebuttal and
 15 surrebuttal. Rebuttal is a procedure for the
 16 introduction of evidence by the applicant that
 17 answers --
 18 **MS. DASSOW:** They can't hear you in the
 19 back.
 20 **MR. BLAKEMAN:** Procedures --
 21 **AUDIENCE VOICE:** That's better.
 22 **MR. BLAKEMAN:** Okay. Procedures for
 23 rebuttal and surrebuttal. Rebuttal is the procedure
 24 for the introduction of evidence by the applicant

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1 that answers evidence introduced by opposing
 2 parties. Surrebuttal is a procedure for opposing
 3 parties to answer evidence introduced in rebuttal by
 4 the applicant. Testimony or exhibits that are
 5 cumulative or attempts to introduce new evidence not
 6 intended to rebut or surrebut prior testimony or
 7 exhibits will not be allowed. Rebuttal and
 8 surrebuttal occur after applicant and all interested
 9 parties have presented evidence. After surrebuttal
 10 and rebuttal, there will be a presentation by the
 11 county followed by closing arguments.
 12 Only applicant and interested parties who
 13 have previously submitted evidence shall be eligible
 14 to present evidence in rebuttal or surrebuttal. If
 15 you are represented by an attorney, your attorney
 16 will handle rebuttal or surrebuttal on your behalf.
 17 Applicant shall present its evidence in
 18 rebuttal first. This evidence shall be confined to
 19 testimony and exhibits that explain, qualify,
 20 modify, discredit, refute or respond to evidence
 21 submitted by those interested parties in opposition
 22 to the application.
 23 Rule number three. After each witness or
 24 applicant presents evidence in rebuttal, they shall

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1 be subject to cross-examination in the following
 2 order: ZBA, units of local government including
 3 school districts, interested parties represented by
 4 an attorney, interested parties not represented by
 5 an attorney, ZBA again, Livingston County staff and
 6 consultants.
 7 After applicant has submitted its rebuttal
 8 evidence and interested parties have had an
 9 opportunity to question the applicant's witnesses,
 10 those interested parties in opposition to the
 11 application shall present their evidence in
 12 surrebuttal. This evidence shall be limited to
 13 testimony and exhibits that explain, qualify,
 14 modify, discredit, refute or respond to the evidence
 15 submitted by applicant in rebuttal, including the
 16 rehabilitation of witnesses whose credibility has
 17 been attacked during rebuttal.
 18 Number five. After each interested party
 19 presents evidence in surrebuttal, they shall be
 20 subject to cross-examination in the following order:
 21 ZBA, units of local government including school
 22 districts, applicant by its attorney, interested
 23 parties represented by an attorney if the witness is
 24 not a client of the attorney, attorneys may not

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1 cross-examine their own client, interested parties
 2 not represented by an attorney, ZBA again,
 3 Livingston County staff and consultants.
 4 Six. The scope, extent and admissibility
 5 of evidence in rebuttal and surrebuttal rests in the
 6 sole discretion of the ZBA.
 7 If you have exhibits to produce, please
 8 have 15 hard copies clearly marked so the ZBA, staff
 9 attorneys and other interested parties can have a
 10 copy.
 11 Number eight. Rebuttal or surrebuttal
 12 witnesses should identify which witness or witnesses
 13 and what testimony or exhibits presented by the
 14 opposing party are being rebutted or surrebutted.
 15 Before each witness testifies or each interested
 16 party conducts a cross-examination, the chairman of
 17 the ZBA shall be able to inquire as to the nature of
 18 the evidence to be presented and questions to be
 19 asked in cross-examination to determine if
 20 appropriate for rebuttal or surrebuttal.
 21 Parties represented by attorneys may only
 22 call those witnesses which have been disclosed by
 23 April 10, 2015, unless authorized by the ZBA for
 24 good cause shown.

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1 That's all ten rules. And we'll have this
 2 up on the website in the morning for the county.
 3 **CHAIRMAN CORNALE:** All right, just want to
 4 clarify just a few things on here. Mr. Blakeman
 5 said only applicant and interested parties who have
 6 previously submitted evidence shall be eligible to
 7 present evidence in rebuttal or surrebuttal. I want
 8 that to extend to those that have testified. Just
 9 because you didn't necessarily produce a paper
 10 document, don't feel that you've lost your
 11 opportunity to rebut or to have surrebuttal, okay?
 12 The other thing is, it's already on here,
 13 it's probably for the sake of keeping the rebuttal
 14 and surrebuttal concise to what we're doing. It
 15 says rebuttal or surrebuttal witnesses should
 16 identify which witness or witnesses and what
 17 testimony or exhibits presented by the opposing
 18 party are being rebutted or surrebutted. So that's
 19 going to -- we need to clearly spell out what
 20 particular portion we're rebutting or surrebutting
 21 to, all right? That will help to aid in keeping
 22 this evening moving along.
 23 So with that, let's take ten minutes. If
 24 anybody has any questions, -- I've got 7:50, so

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1 let's try to get going at 8:00. If you have any
 2 questions, come forward and we'll try to get an
 3 answer.
 4 (Recess at 7:50 p.m. to 8:01 p.m.)
 5 **CHAIRMAN CORNALE:** All right. We'll --
 6 just a few things here. Next meeting, May 7th, it's
 7 going to be -- or, sorry, not the next meeting but
 8 the next scheduled meeting further out we're going
 9 to have for May 7th. The meeting will take place at
 10 seven o'clock. The reason there's a time change is
 11 the regular zoning board, our full board, will meet
 12 at 6:30. We have one case before us. We'll go
 13 ahead and end that particular meeting, and then
 14 we'll move into this meeting. So May 7th at seven
 15 o'clock.
 16 **MR. LUETKEHANS:** Mr. Chairman, where's
 17 that at, do you know?
 18 **CHAIRMAN CORNALE:** That's going to be here
 19 at the historic courthouse.
 20 All right, the Patrick Engineering report,
 21 the county has hired consultants to validate or look
 22 at the facts presented in this case. The Patrick
 23 Engineering report is expected to be submitted on
 24 Wednesday, our next meeting on Wednesday. As I say

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1 that, I want to remind everyone the Patrick
 2 Engineering report is a report that the county has
 3 commissioned to have produced. It's simply somewhat
 4 of a fact check by consultants that we've had a
 5 relationship with in the past. So that that will be
 6 taken.
 7 Because it's of that nature, the
 8 questioning along that report will not, will not
 9 take place. We will allow that report. It's for
 10 advice only for us. We have a relationship with
 11 them, so we'll accept that report.
 12 **MR. LUETKEHANS:** Mr. Chairman, just for
 13 the record, I understand what you're saying, but I
 14 do have to place an objection in the record in that
 15 this is exactly like the Rand report and the ability
 16 to cross-examine is not available to us. And under
 17 the Klaeren case, we should be given a right to
 18 cross-examine. Thank you.
 19 **CHAIRMAN CORNALE:** Okay. To that, because
 20 of the relationship the county has with the
 21 individuals, we will accept that report without them
 22 testifying due to our past relationships and the
 23 nature of the report.
 24 So with that, we'll go ahead and start our

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1 rebuttal process. Mr. Blazer, you can begin.
 2 **MR. BLAZER:** Thank you, Mr. Chairman, I'll
 3 call Dr. Mark Roberts.
 4 (Dr. Mark Roberts called as rebuttal
 5 witness.)
 6 **CHAIRMAN CORNALE:** Mr. Roberts, just want
 7 to remind you that from previous hearings you're
 8 still under oath for this part of the process as
 9 well.
 10 **DR. ROBERTS:** Totally understand.
 11 **MR. BLAZER:** Dr. Roberts, you're going to
 12 have keep your head on a swivel I suppose.
 13 **DR. ROBERTS:** Well, I apologize to the
 14 audience for giving them my best side, but anyway --
 15 **MR. BLAZER:** That might be a matter of
 16 opinion I suppose.
 17 **QUESTIONS BY**
 18 **MR. BLAZER:**
 19 Q. You're aware, aren't you, Dr. Roberts,
 20 that there has been reference in these hearings to
 21 the so-called Cape Bridgewater report out of
 22 Australia?
 23 A. Yes, I have.
 24 Q. Okay. And have you reviewed that report?

1 **A. In depth I have, sir.**
 2 Q. All right. I'm not going to ask you any
 3 questions about that report from an acoustic
 4 perspective, we'll save that for Mr. Hankard, so Mr.
 5 Punch in his testimony said that this study provides
 6 new proof that there is a cause/effect relationship
 7 between wind turbines and sensations. Do you agree
 8 with that statement?

9 **A. I don't agree with the shared proof,
 10 that's correct.**

11 Q. Mr. Punch also stated that this study
 12 provides definitive proof that wind turbines
 13 absolutely cause symptoms in some of the wind farm
 14 residents. Do you agree with that statement?

15 **A. I absolutely do not agree with that.**

16 Q. All right. Could you explain the basis
 17 for your disagreement from a medical and
 18 epidemiological perspective?

19 **A. Well, I'll take it from the
 20 epidemiological standpoint first. As an
 21 epidemiologist, I look at these sorts of studies for
 22 their design not for who funded them or that sort of
 23 thing. First and foremost, their design --**

24 **MR. LUETKEHANS:** Dr. Roberts, can you

1 **MR. LUETKEHANS:** You know what? He's here
 2 to testify, he's here to respond to what the Cape
 3 Bridgewater says. He's not here to -- so where she
 4 found it or where she read it is irrelevant. You
 5 said he's here to respond to Punch. If he wants to
 6 respond to Punch, he should, and Punch didn't rely
 7 on the Internet.

8 **CHAIRMAN CORNALE:** All right, Mr. Roberts,
 9 why don't you just -- why don't you move on past
 10 that, and really let's move on past the Internet
 11 sources as best as we can.

12 **BY MR. BLAZER:**

13 Q. Let's try and focus on the report, Doctor,
 14 okay?

15 **CHAIRMAN CORNALE:** Perfect.

16 **A. Done deal. Well, first of all, he looks
 17 at six individuals and three homes. That's a far
 18 cry from the number of people that are in that
 19 vicinity of that wind turbine farm. On page 218 of
 20 that study he says, "This study did not include any
 21 testing in relation to sleep disturbance or health
 22 effects." And I think it's really important that he
 23 makes this distinction between sensation and health
 24 effects. I don't quite understand what that means.**

1 speak a little closer? I'm having a real hard time
 2 hearing you, I apologize.

3 **A. Gotcha.**

4 **MR. LUETKEHANS:** Thank you.

5 **A. Have to lean way over.**

6 **MR. LUETKEHANS:** Sorry.

7 **A. All right, I'll talk louder. Is that
 8 better? Okay. So as an epidemiologist, I look at
 9 the design, how it's put together. And you look at
 10 this and you look at what the author of this -- what
 11 Mr. Cooper actually said about it, it really and
 12 truly does not show proof of an association. In
 13 fact, you can't do that with this study.**

14 **There's been a number of discussions on
 15 the Internet about how great it is as an
 16 epidemiology --**

17 **MR. LUETKEHANS:** Objection to what's on
 18 the Internet.

19 **MR. BLAZER:** That's been testified to in
 20 this proceeding, Mr. Chairman. Ms. Fehr, among
 21 others, when I asked her, said that she -- she
 22 didn't read the report. What she knew about the
 23 report she read on National Wind Watch which is on
 24 the Internet.

1 **I see what he has defined that, but again, that does
 2 not -- he's not looking at health effects. And
 3 that's one of the major questions for you as a
 4 commission.**

5 **Secondly, the report shows there's no
 6 correlation between reported symptoms and wind
 7 turbine health issues if you use the definition of
 8 sensation that he has. And then at page 75 he also
 9 talks about there's no correlation in the results
 10 versus sensations either, so he's covering it both
 11 ways in his report. It's a long report and takes a
 12 lot to get through it, but the point being that
 13 there's no correlation between wind turbines and
 14 sensations or health effects if you use his
 15 definition.**

16 **Again, I talk about the fact that it's
 17 three homes, six individuals. Those are all
 18 individuals who have claimed adverse health effects
 19 as a result and have made complaints to the company.
 20 So again, it's biased, in fact, not only of what
 21 they're collect -- the information that they're
 22 collecting, but also in what epidemiologists call
 23 selection bias. Actually there's a selection. They
 24 didn't go out and choose people at random. They**

1 chose six people who had complained about wind
2 turbines.

3 So it's not an epidemiological study, and
4 it shouldn't be given anything more than a mere
5 observation of people who were complaining on that
6 particular period of time. The other thing being
7 that there were no -- there's no correlation between
8 the wind turbine operations and the complaints.

9 So I think it's very, very important to
10 keep in mind the bias issue and the selection issue
11 in that it's not an epidemiological study.

12 Q. Sticking with Jerry Punch's testimony,
13 you're aware that he based his opinions regarding
14 adverse health effects in part on testimony or what
15 he claimed to be testimony of others in legal
16 proceedings in the U.S. and other countries?

17 A. I am aware of that.

18 Q. All right. And are you aware that when he
19 was here Mr. Punch said that he didn't bring any of
20 those materials with him to this proceeding because
21 he said it was too tedious?

22 A. I was here and heard him say that.

23 Q. Are you familiar with some of those legal
24 proceedings and the decisions that came out of them?

1 don't have the number on that.

2 A. No. 87.

3 Q. Thank you, 87. All right. And you also
4 reviewed Pleasant Ridge Exhibit 285.

5 MR. LUETKEHANS: Can I object as to 280
6 here? First of all, Mr. -- Dr. Punch testified that
7 he did not review or was not aware, had not reviewed
8 the Ontario decision, so to say that somehow this is
9 refuting the Ontario, his response to Ontario -- in
10 fact, you didn't let 280 in because he had never
11 seen it.

12 MR. BLAZER: If I can respond to that?
13 Dr. Punch, as Dr. Roberts just testified, said that
14 he relies in part for his opinion regarding adverse
15 health effects on legal proceedings in this country
16 and other countries, and several of the individuals
17 he relied on, among others, include Dr. Pierpont.

18 MR. LUETKEHANS: And is there any
19 testimony that he relied on Dr. Pierpont's testimony
20 in any case, because there's not.

21 MR. BLAZER: He was using Dr. Pierpont and
22 he identified Pierpont and several others as --
23 which we're going to go through in a few minutes --
24 as individuals that form the basis of his opinions

1 A. Yes, I am. I was kind of surprised that
2 his slide number 31 talked about legal proceedings.
3 As you go through and look for legal proceedings
4 where various individuals have testified about the
5 effects of wind turbines, such as Nina Pierpont for
6 example, she coined the term wind turbine syndrome,
7 in the Ontario Environmental Review Tribunal, they
8 actually went through her opinions and they rejected
9 those. Granted, it was on a procedural basis, but
10 then following that, my testimony was used in a
11 federal case in San Diego, in southern California,
12 called the Tule case. And in that particular case,
13 they found that her opinions were not acceptable to
14 them and they found that my opinion and Dr. King's
15 opinion from Ontario did reflect the opinions of the
16 science. So --

17 Q. If I may interrupt for just a moment,
18 Doctor, one opinion that you referred to from the
19 Ontario Environmental Review Tribunal, was that the
20 Wrightman matter, Pleasant Ridge Exhibit 280?

21 A. That is the Wrightman.

22 Q. And the Tule, T-U-L-E --

23 A. T-U-L-E wind project.

24 Q. That decision is already in evidence and I

1 and I --

2 MR. LUETKEHANS: Yeah, but it's not these
3 decisions, so --

4 MR. BLAZER: Can I please finish?

5 MR. LUETKEHANS: -- to say that --

6 MR. BLAZER: Can I please finish? So it's
7 Mr. Punch who put into issue the question of whether
8 or not the people that he relies on have in fact --
9 their opinions have, in fact, been accepted in legal
10 proceedings.

11 MR. LUETKEHANS: But not in Ontario.

12 MR. BLAZER: He's the one though --

13 MR. LUETKEHANS: Excuse me, I apologize, I
14 thought you were done.

15 MR. BLAZER: He's the one who put the
16 issue in evidence at issue, whether or not those
17 legal proceedings have, in fact, accepted the
18 opinions that he's relying on.

19 MR. LUETKEHANS: So we're going to go
20 through all these opinions, all these decisions that
21 he didn't testify to somehow in rebuttal? Exhibit
22 280 and 285 weren't even allowed in because he had
23 never seen them let alone relied on them.

24 CHAIRMAN CORNALE: All right. 280 wasn't

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1 allowed in. Mr. Punch alluded to legal proceedings
 2 but did not identify any of them, so you can't rebut
 3 something that wasn't presented. He didn't identify
 4 any particular legal cases, so rebuttal to a
 5 specific legal case will not be allowed. So, Mr.
 6 Blazer, can you move on?
 7 **MR. BLAZER:** Can I have an offer of proof
 8 just to go through quickly? No? You're not going
 9 to allow it. Tom is shaking his head.
 10 **MR. LUETKEHANS:** For the record, I was
 11 already denied one in this hearing.
 12 **BY MR. BLAZER:**
 13 Q. All right. Let's move to the nocebo
 14 effect. You had spoken earlier at these hearings
 15 about the nocebo effect, correct?
 16 **A. That is correct.**
 17 Q. And you're aware that Mr. Punch testified
 18 that the nocebo effect is a psychogenic effect based
 19 on the patient's expectations and perceptions; is
 20 that correct?
 21 **A. I believe I recall that, that's correct.**
 22 Q. And do you agree with Mr. Punch that the
 23 nocebo effect was discovered a long time ago, well
 24 before the advent of utility scale wind turbines?

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1 **A. I do.**
 2 Q. All right. You were here for Mr. Hartke's
 3 testimony; is that correct?
 4 **A. That is correct.**
 5 Q. And you recall him talking about a town
 6 hall meeting that he attended and spoke at here in
 7 Livingston County last summer?
 8 **A. That is correct, I did hear that.**
 9 Q. All right. And have there been any
 10 peer-reviewed studies conducted on the impact of the
 11 presentation on that day?
 12 **A. Actually there's been a number of studies**
 13 **that have come out that looked at why this is**
 14 **evolving, and there's one particular study that has**
 15 **looked at all the wind turbine farms in operation in**
 16 **Australia at the time of that publication, which was**
 17 **in 2013. It's called Chapman. And basically they**
 18 **went through and they looked at the turbines and**
 19 **looked at complaints of those turbines, and they**
 20 **found that a majority of those turbines, those wind**
 21 **farms did not have complaints lodged against them,**
 22 **and these were even with the large turbines greater**
 23 **than 1 megawatt.**
 24 **So what it really shows is that once there**

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1 **was started to be opposition to wind turbines, that**
 2 **the complaints began to increase in both numbers and**
 3 **in velocity if you will. And so it really -- this**
 4 **is a peer-reviewed published literature article**
 5 **looking at the phenomenon of how this has developed,**
 6 **and the underlying point is the fact about testimony**
 7 **like you heard is one of the things that builds**
 8 **these -- this concern about wind turbines.**
 9 **And so this particular article, then**
 10 **another one by Knopper, K-N-O-P-P-E-R, in about 2011**
 11 **also looked at these same issues on a larger scale.**
 12 **And what we're seeing is the development of it's a**
 13 **them-versus-us sort of situation in hearings such as**
 14 **this all over the country and in parts of the world.**
 15 Q. Doctor, I want to focus specifically on
 16 the impact of a presentation like Mr. Hartke and
 17 some others have testified to in this proceeding.
 18 I've handed you what's been marked as Pleasant Ridge
 19 Exhibit 272, an article dated December 12th, 2014.
 20 Are you familiar with this article?
 21 **A. I am.**
 22 Q. All right. And could you summarize this
 23 document or this article for us, this study?
 24 **A. Well, this is actually a follow-up to that**

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1 **about the nocebo effect in residences, which it's by**
 2 **the same author, Simon Chapman, and really explains**
 3 **the variation in the concerns and underscores the**
 4 **issue about nocebo. Nocebo is just the opposite of**
 5 **a placebo effect. A placebo effect is if you think**
 6 **the medication is going to help you, it's more**
 7 **likely to make you feel better. If you don't have**
 8 **faith in that, then a negative feeling about that**
 9 **treatment can adversely affect how you feel. Not**
 10 **necessarily your condition but how you feel about**
 11 **that.**
 12 **So this is not a new phenomenon, but this**
 13 **is one that is seen more and more, which would be**
 14 **evident in the Cape Baywatch --**
 15 Q. Bridgewater.
 16 **A. Baywater -- Bridgewater, excuse me.**
 17 Q. Baywatch was a bad TV show.
 18 **A. Yeah, I didn't follow it. So this is**
 19 **actually an example of why you would see the**
 20 **phenomenon that you did in Bridgewater, the Cape**
 21 **Bridgewater evaluation.**
 22 Q. Now, what was the specific subject of this
 23 study, Pleasant Ridge 272?
 24 **A. Well, I mean the title talks about it**

1 actually fomenting sickness, it actually enhances,
2 it clearly brings it to attention.

3 Q. Was the subject of this study an anti-wind
4 farm public meeting and the declaration of negative
5 news?

6 A. It was.

7 Q. Okay. And what was the result of this
8 study or the conclusion?

9 A. Well, it clearly indicates that meetings
10 that foment that feeling about adverse opinions
11 about wind turbines affects a person's feeling about
12 the wind turbines.

13 Q. Now, Dr. Roberts, you reviewed the
14 testimony of some of the other folks who have
15 appeared in this hearing, correct?

16 A. I have.

17 Q. And some of those folks have said that
18 they experienced something when they visited a wind
19 farm. You're aware of that?

20 A. I am aware of that.

21 Q. All right. How do you explain that?

22 A. Well, I mean number one is the fact that
23 each person showed emotion, I mean that's a human
24 nature, a concern, but that's part of the issue that

1 A. -- he said it was very, very important to
2 look at the preexisting conditions of those
3 individuals. So that's it in a nutshell.

4 Q. All right. Would it be fair to say that
5 you've done an expansive study of the peer-reviewed
6 literature around the world regarding purported
7 health impacts from wind farms?

8 A. The English language literature,
9 peer-reviewed literature --

10 MR. LUETKEHANS: Objection, duplicative.
11 What -- this is not rebuttal of anything. What are
12 we rebutting?

13 Q. I'll move on. You mentioned Dr.
14 Ellenbogen and I want to ask you about one
15 particular subject that Mr. Hayes raised. You're
16 aware that Mr. Hayes made reference to a paper that
17 Dr. Ellenbogen participated in in 2010. That's
18 Hayes Exhibit 5.

19 A. That is correct.

20 Q. Okay. And was that document, Hayes
21 Exhibit 5, the final peer-reviewed version of that
22 2010 study that Dr. Ellenbogen participated in?

23 A. No. The one that was Hayes No. 5 that I
24 saw and read was actually a report from the research

1 comes up. That's why we need science, that's why we
2 need to look at epidemiology, because if a person
3 feels or begins to feel that wind turbines cause a
4 health effect, that can affect their reporting of
5 symptoms.

6 You know, I always talk about the fact of
7 common symptoms like we're seeing, and one, Dr.
8 Chapman I believe, reported 222 different types of
9 symptoms have been in the literature concerning wind
10 turbines. Many of those are ones that we experience
11 on a weekly basis: headache, irritability, those
12 sorts of things. Not vertigo. One of the persons
13 reported vertigo. I don't -- I don't have the
14 medical records, so I don't know how that was
15 evaluated. That's dizziness and there's a number of
16 different causes for dizziness.

17 The point being that, as I saw the
18 testimony, the symptoms actually occurred prior to
19 the exposure to the wind turbines. This is very
20 important. You're not only looking at what they're
21 reporting at the time of being around wind turbines
22 but looking at their medical history, because as Dr.
23 Ellenbogen testified back a month or so ago --

24 Q. Six months ago.

1 coalition that was commissioned and Dr. Ellenbogen
2 was one of the researchers involved in that, and so
3 that was a report back to that coalition to answer
4 the question about hospital noise.

5 Subsequent to that, Dr. Ellenbogen also
6 participated in the Massachusetts Department of
7 Environmental Protection's study on wind turbines
8 and found no increased health effects associated
9 with wind turbines. Then the paper by Buxton, which
10 was the peer-reviewed published version of that,
11 didn't even mention wind turbines.

12 So I think it shows an evolution of what
13 we see in the science in the literature. An idea
14 comes up, a report's generated about it, some sort
15 of opinion is made about it, and then a study is
16 done, and that's what we saw here with Dr.
17 Ellenbogen.

18 Q. Doctor, do you have Pleasant Ridge Exhibit
19 334 there with you?

20 A. I do not. Oh, okay. I didn't recognize
21 it as that.

22 Q. You do have that one?

23 A. I do.

24 Q. And is Pleasant Ridge Exhibit 334 the

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1 final peer-reviewed version of the study that Dr.
 2 Ellenbogen began participating in in 2010 that was
 3 published in the Annals of Internal Medicine?
 4 **A. That is correct. This is the article that**
 5 **I referred to as the Buxton article, 2012, and it's**
 6 **in the Annals of Internal Medicine. So that's a**
 7 **peer-reviewed published article in a well-known**
 8 **journal.**
 9 Q. And you said that this one doesn't say
 10 anything about wind turbines?
 11 **A. That is correct, it does not.**
 12 Q. Why not?
 13 **A. I think when --**
 14 **MR. LUETKEHANS:** Objection, foundation.
 15 How's he supposed to know why not?
 16 Q. Could you answer how you know that?
 17 **A. To answer your question, I called Dr.**
 18 **Ellenbogen when I saw this and asked him what --**
 19 **what the deal was. And so I talked to him at length**
 20 **about it.**
 21 **MR. LUETKEHANS:** Objection, ask you to
 22 bring Dr. Ellenbogen in to talk about his own study.
 23 **MR. BLAZER:** Well, the problem with --
 24 **MR. LUETKEHANS:** He's available, he's

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1 their witness, there's no reason that they should
 2 have hearsay on this issue.
 3 **MR. BLAZER:** Two responses if I may, Mr.
 4 Chairman. Number one, hearsay has been allowed with
 5 experts. Even Mr. Luetkehans has acknowledged that
 6 an expert can testify to --
 7 **MR. LUETKEHANS:** Not when the expert is
 8 available.
 9 **MR. BLAZER:** Number two, I was required to
 10 disclose my rebuttal witnesses on March 25th, and it
 11 was made very clear to me that I would not have the
 12 opportunity to disclose any further witnesses after
 13 that date. Mr. Hayes testified about his Exhibit 5
 14 after March 25. So the best we could do, as has
 15 been acknowledged in this case, is use the expert
 16 that we had disclosed, who clearly is familiar with
 17 the subject matter, to identify this report and why
 18 it contains no information regarding wind turbines.
 19 **MR. LUETKEHANS:** Then they should have
 20 disclosed Dr. Ellenbogen.
 21 **CHAIRMAN CORNALE:** All right, I think
 22 rebuttal does need to focus on what he can provide
 23 with direct regards to himself. I think he's trying
 24 to change the credibility or -- of another one of

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1 your witnesses, and I would agree that if he is
 2 available, he should be able to rebut his own
 3 particular --
 4 **MR. BLAZER:** I understand --
 5 **CHAIRMAN CORNALE:** -- study.
 6 **MR. BLAZER:** I understand, Mr. Chairman,
 7 but he's not available because I do not have the
 8 right per this board's rules to call Dr. Ellenbogen
 9 after I already had to disclose my rebuttal
 10 witnesses on March 25th, so he is not available.
 11 **MR. LUETKEHANS:** And you had the right to
 12 disclose him at that time.
 13 **MR. BLAZER:** Except --
 14 **MR. LUETKEHANS:** You actually disclosed
 15 two other people who are not coming in to testify.
 16 **MR. BLAZER:** Except that Mr. Hayes didn't
 17 testify -- didn't introduce this document, which
 18 clearly now we know is not a final version of the
 19 report, until after March 25th. So, no, he wasn't
 20 available.
 21 **CHAIRMAN CORNALE:** All right. Counsel has
 22 advised me that unfortunately you should have
 23 disclosed the individual. We're going to allow the
 24 objection and we're just going to move on, so --

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1 **MR. BLAZER:** All right. Well, with that,
 2 that's all I have for Dr. Roberts.
 3 **CHAIRMAN CORNALE:** All right, thank you.
 4 All right, at this point, do we have any questions,
 5 ZBA, for Dr. Roberts?
 6 **MS. HUISMAN:** Just one.
 7 **QUESTIONS BY**
 8 **MS. HUISMAN:**
 9 Q. Dr. Roberts, you mentioned selection bias
 10 in the Cape Bridgewater study, six individuals that
 11 were cited, and I'll be honest, I didn't read the
 12 entire Cape Bridgewater study that was given to us.
 13 **A. I understand.**
 14 Q. It made sense to me, though, that if
 15 you're going to try to study the effect, if
 16 someone's claiming they have effects from wind
 17 turbines and I do not, why would anyone talk to me
 18 about that and ask me questions about it if I don't
 19 have effects, suffer from effects?
 20 **A. Excellent question. The point being that**
 21 **in epidemiology you have to compare the results of**
 22 **one group against the other. And so it's very**
 23 **important, because the symptoms and the sensations**
 24 **or whichever way he uses that, are common, you need**

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1 to make sure that they don't -- are not occurring in
 2 other people as well. So what's the background
 3 level of headache, dizziness, any of those
 4 sensations that he reported? So you don't have a
 5 comparison group. If I said three people in this
 6 room have headaches, we don't know if that's caused
 7 by this room, this process or whatever, so we really
 8 have to compare is that an unusual number? So it's
 9 very common. It's called selection bias.

10 Q. I guess I understand if you're doing -- I
 11 understand wanting to have people that maybe don't
 12 have effects, but how do you -- how does you -- how
 13 does a doctor learn about someone that's complaining
 14 of health problems if they don't start asking them
 15 questions, and then, you know, if they're leaning
 16 towards this is a major change in my life, I mean
 17 how do you just discard all that?

18 A. You don't discard that and I'm not saying
 19 that at all. In each of the individuals, the mother
 20 with the kids, the father with the kids that I
 21 reviewed their testimony, you know, I'm not
 22 discarding that at all. But what I'm saying is the
 23 fact that when you go to the doctor you don't say I
 24 have a brain tumor, treat me for a brain tumor. You

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1 say these are my symptoms and then the doctor works
 2 through that. If you went in and said, Doctor, you
 3 know, I've been exposed to radiation, you know, I've
 4 smoked for 50 years and now I've got a terrible
 5 cough and pain in my chest, the doctor's
 6 automatically going to go that direction because we
 7 know what lung cancer symptoms are.

8 The case definition that Dr. McMurtry has
 9 brought out has not been validated, it's not been
 10 accepted, so we don't have a set of criteria that
 11 have been validated that it would be consistent with
 12 exposure to wind turbines.

13 Q. So let's say that someone might have
 14 preexisting conditions of, I don't know, I'm
 15 sensitive to -- I get motion sick if I ride in the
 16 back seat of a car. Will that some day if I'm by a
 17 wind turbine bother me more because I have that
 18 sensitivity to motion? I don't know, but then --

19 A. I mean --

20 Q. I guess I'm just trying to in my head
 21 reconcile how do you dismiss these folks that are
 22 saying they have problems and they might have
 23 preexisting conditions that do make them more
 24 susceptible to the effects where another person

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1 doesn't have any effects from them?

2 A. Absolutely, and I appreciate the
 3 opportunity to talk about that. One of the things
 4 is dizziness is common. Car sickness is common.
 5 You know, I don't know the percentages, I can't give
 6 you that right off the top of my head, but the point
 7 being many of the symptoms that are reported to be
 8 associated with wind turbines are very common.
 9 So -- and those conditions that are more severe need
 10 to be worked out. As Dr. Ellenbogen said from his
 11 experience in Michigan, oftentimes ringing in the
 12 ears, for example, may indicate high blood pressure,
 13 it may involve something else.

14 So each person, each of these individuals
 15 that gave testimony, if they have symptoms, they
 16 should go to their doctor and talk to their doctor
 17 about the symptoms, not go in and say, hey, it's
 18 wind turbine syndrome, I know what it is, you know,
 19 treat me for it. You've really got to let the
 20 doctor do the evaluation.

21 The second thing is the fact that it's
 22 very curious that there are certain people that have
 23 complaints about wind turbines and others don't. We
 24 need to look at that. And that's one of the things

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1 that's been talked about in the literature, that's
 2 one of the things that's being developed, but we
 3 understand you can't -- there are visual effects of
 4 wind turbines and there are perceived sound effects
 5 of wind turbines, so you've got to sort through all
 6 those things.

7 But we know that, for example, I'm not
 8 aware -- I mean there are wind turbine farms where
 9 there are no complaints at all period. So is it
 10 that sensitive people are in one spot in a wind
 11 farm? I don't think so. There's -- I don't know
 12 why they have complaints. It may be anxiety, it may
 13 be annoyance, and I talked to the council about
 14 that, about annoyance. Annoyance is not a disease,
 15 but I mean some people right now are annoyed in this
 16 room. It's not -- it's not a disease.

17 Q. Okay.

18 CHAIRMAN CORNALE: All right. Units of
 19 local government, school districts, any questions?
 20 All right. Mr. Luetkehans, do you have any
 21 questions for Dr. Roberts?

22 MR. LUETKEHANS: Yes, give me just a
 23 minute please.

24 CHAIRMAN CORNALE: All right.

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1 QUESTIONS BY
 2 **MR. LUETKEHANS:**
 3 Q. Dr. Roberts, Pleasant Ridge Exhibit 272,
 4 it talks about a nocebo effect hypothesis, correct?
 5 **A. That is correct.**
 6 Q. Okay. There's no proof that there's a
 7 nocebo effect; it's an hypothesis.
 8 **A. In this situation, it's talking about**
 9 **nocebo effect from wind turbines. Nocebo effect is**
 10 **a recognized occurrence in medical treatment.**
 11 Q. Correct, but as it relates to wind
 12 turbines, it's just a hypothesis in this paper,
 13 correct?
 14 **A. In this particular paper, that's what it's**
 15 **entitled.**
 16 Q. In fact, you complained of Dr. Salt's
 17 testimony or Dr. Salt's position because it was --
 18 you see it as just a hypothesis, correct?
 19 **A. That is correct.**
 20 Q. That's exactly what you said about Dr.
 21 Salt's position.
 22 **A. That is what I said about --**
 23 Q. It's a hypothesis.
 24 **A. -- Dr. Salt.**

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1 Q. Thank you. You would agree that it is
 2 not -- that Cape Bridgewater doesn't even intend --
 3 doesn't even pretend or portend to be an
 4 epidemiological study, correct?
 5 **A. That is correct.**
 6 Q. In fact, Mr. Cooper when he wrote it says
 7 it's not. It's not a medical study, correct?
 8 **A. There's a difference between a medical**
 9 **study and an epidemiological study.**
 10 Q. Is it a medical study either?
 11 **A. No. No, it's not.**
 12 Q. Okay. He says it's not a medical study,
 13 correct?
 14 **A. I believe he did.**
 15 Q. Yeah. And you said you need to know the
 16 -- something about you need to know, you want to
 17 know the percentage of people who are affected
 18 versus unaffected, that's why you had a concern
 19 about this self-selection, correct?
 20 **A. That is partly correct, yes.**
 21 Q. Okay. The people who are not being tested
 22 in this case are the people who have no effect,
 23 correct, not feeling any -- not having any even
 24 alleged effect, correct?

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1 **A. We have no idea about that. They're just**
 2 **not people who didn't complain.**
 3 Q. Okay. And let's talk about people who
 4 complain. We heard -- you talk about the people who
 5 complain are complaining more after others complain.
 6 Is that pretty much what you said?
 7 **A. That's what we see in the literature**
 8 **that's been reported.**
 9 Q. Okay. I can't -- everybody who complains
 10 after the first one. So if a hundred people
 11 complain, the next 99 are all complaining after the
 12 first one, correct?
 13 **A. In the scenario you've designed, yes.**
 14 Q. Okay. So as soon as one person complains,
 15 everybody else is complaining after that first
 16 person.
 17 **A. That's correct.**
 18 Q. Okay.
 19 **A. May I respond to the rest of that?**
 20 Q. No, that's fine.
 21 **MR. BLAZER:** Well, I think he should be
 22 allowed to, Mr. Chairman.
 23 **MR. LUETKEHANS:** Well, you always think he
 24 should be allowed to, but so far they haven't been

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1 allowed to, so why change now?
 2 Q. You said you did not know what --
 3 **MR. BLAZER:** Mr. Chairman, he wasn't done
 4 answering the question.
 5 **MR. LUETKEHANS:** He didn't -- he was done
 6 answering my question.
 7 **CHAIRMAN CORNALE:** He answered the
 8 question. Let's move on.
 9 **BY MR. LUETKEHANS:**
 10 Q. You said you didn't know what sensations
 11 meant in the study, correct?
 12 **A. I said that he had defined it one way and**
 13 **talked about health effects another, so it was**
 14 **confusing.**
 15 Q. It was confusing, but the sensations, what
 16 those were, was -- that was clearly defined,
 17 correct?
 18 **A. He defined that in his paper, that's**
 19 **correct.**
 20 Q. Okay. And he defined sensation to include
 21 headache, pressure in the head, ears or chest,
 22 ringing in the ears, heart racing or a sensation of
 23 heaviness, correct?
 24 **A. Where are you reading at now?**

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1 Q. Bottom of page 1 of the executive summary,
 2 about the fifth page in, maybe sixth.
 3 **A. Okay.**
 4 Q. He defines sensation to include headache,
 5 pressure in the head, ears or chest, ringing in the
 6 ears, heart racing or a sensation of heaviness,
 7 correct?
 8 **A. That is correct.**
 9 Q. So that's what he was measuring, correct?
 10 **A. That is correct.**
 11 Q. And he found that there was a correlation
 12 between certain operations at the wind farm and
 13 these, quote, sensations, correct?
 14 **A. Certain operations which were about**
 15 **whether or not the wind turbines were even turned**
 16 **on.**
 17 Q. I did not hear that, so I apologize. I
 18 don't mean to make you do it twice, but I couldn't
 19 hear you, Dr. Roberts.
 20 **A. There was not a correlation between wind**
 21 **turbine operation and those symptoms.**
 22 Q. There was not?
 23 **A. There was not.**
 24 Q. But there was correlation between certain

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1 operations within the wind turbine and those
 2 symptoms, correct, he found?
 3 **A. I don't understand that.**
 4 Q. Okay. He found a position or a pattern of
 5 high severity of disturbance, this is page 2 of that
 6 executive summary, to be associated with four
 7 different operating scenarios of the wind farm
 8 being: one, when the turbines were seeking to
 9 start; two, an increase in power output of the farm
 10 on the order of 20 percent; a decrease in the power
 11 output of the farm on the order of 20 percent; and
 12 the situation when the turbines were operating at
 13 maximum power and the wind increased above 12 meters
 14 per second, correct?
 15 **A. That's what he said, but that doesn't say**
 16 **anything about noise.**
 17 Q. But it does say something about sensations
 18 which was the question not noise, correct?
 19 **A. But it --**
 20 Q. My question, Dr. Roberts, is did he find a
 21 correlation in his report between these sensations
 22 and certain operations of the wind farm? That's my
 23 only question.
 24 **A. That's what he reports in page ii.**

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1 Q. Okay. Page 75, do you have that report
 2 with you?
 3 **A. I do.**
 4 Q. Okay. This is the page you said that
 5 there was no correlation versus sensation -- of
 6 sensations, correct?
 7 **A. Correct.**
 8 Q. And that's from this, what's called the
 9 block, the top block, is that what you're saying, or
 10 testimony in --
 11 **A. I recall that top block, that's correct.**
 12 Q. Okay, it's in orange for lack of a better
 13 word.
 14 **A. Exactly.**
 15 Q. Okay.
 16 **A. Exactly. This first orange box on that**
 17 **page.**
 18 Q. Okay. And this is referring to the 31.5
 19 plus side band frequencies, correct?
 20 **A. I can't testify to that.**
 21 Q. Okay, so you don't know. Okay. He does
 22 go on in Section 11.1 on page 214 to say in the
 23 first bullet point of Section 11.1, "The residents'
 24 observations and identification of sensation

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1 separately to vibration and noise indicates that the
 2 major source of complaint from the operation of the
 3 turbines would appear to be related to sensation
 4 rather than noise or vibration." Do you see that?
 5 **A. I do.**
 6 Q. Okay. And then the next one talks about
 7 this 20 percent and start-up, et cetera, correct?
 8 We already discussed --
 9 **A. Tell me -- tell me where you are now.**
 10 Q. The next bullet point.
 11 **A. Starts out for residents, for some**
 12 **residents?**
 13 Q. Significant sensation.
 14 **A. Got it.**
 15 Q. And that's dealing with the same things we
 16 already talked about, and I don't want to have to
 17 make you go through it again if that's okay. So
 18 let's go to the third one. "For some residents
 19 experiencing adverse sensation effects, the impact
 20 can be exacerbated by bending over rather than
 21 standing, with the effect in some cases being
 22 reported as extremely severe and lasting for a few
 23 hours." Correct?
 24 **A. That's what the report says.**

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1 Q. And then he goes on to say, "With the wind
 2 farm not in operation, the residents indicated noise
 3 vibration and sensation are low in severity
 4 ratings." Correct?
 5 A. **That's what he says.**
 6 Q. Okay. And that's what he found, right?
 7 A. **Not -- when you look at the graphs, no.**
 8 Q. When I look at what?
 9 A. **When you look at the graphs individually,**
 10 **you see that sometimes people report increased**
 11 **severity when, in fact, the turbines are not even**
 12 **turning, they're not even -- there's no output.**
 13 Q. But he found a correlation, correct?
 14 A. **I don't know what his correlation is**
 15 **because this is not an epidemiological study nor did**
 16 **he do statistical --**
 17 Q. So because it's -- I'm sorry, I apologize.
 18 A. **He did not do a statistical analysis of**
 19 **this.**
 20 Q. Okay, so because it's not an
 21 epidemiological study, it's not something that
 22 you're testifying about. I mean you said you don't
 23 know what the correlation is because it's not an
 24 epidemiological study. We understand it's not an

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1 epidemiological study. We already got there. So
 2 the question is, is this within your wheelhouse to
 3 even testify?
 4 A. **Absolutely.**
 5 Q. It is. Sensation, noise, those are within
 6 your wheelhouse.
 7 A. **This was presented as being part of the**
 8 **evidence associated with health effects of wind**
 9 **turbines, so I felt compelled to look at the whole**
 10 **thing and see if it had any information. Again, I**
 11 **said I don't look at who funded it, that sort of**
 12 **thing. I look at it for what it is and that's --**
 13 Q. Okay, in this case --
 14 A. **-- the way I got --**
 15 Q. I'm sorry, in this case who funded it?
 16 A. **I have no idea. Oh, this was by Pacific,**
 17 **Hydro Pacific.**
 18 Q. The actual wind turbine company --
 19 A. **Wind turbine company --**
 20 Q. -- funded this, correct?
 21 A. **-- correct.**
 22 Q. So Mr. Cooper was hired by the wind
 23 turbine company.
 24 A. **That is correct.**

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1 Q. And these are his findings, correct?
 2 A. **That is correct.**
 3 Q. When was the town hall meeting that Mr.
 4 Hartke attended that you talked about?
 5 A. **I don't remember the exact date. It was I**
 6 **believe he said last year. I don't remember the**
 7 **exact date.**
 8 Q. And you sat through Mr. Hartke's
 9 testimony, correct?
 10 A. **I did.**
 11 Q. And you also saw that he started -- he
 12 started complaining of these symptoms before that
 13 town hall meeting, correct?
 14 MR. BLAZER: Objection, beyond the scope
 15 of the rebuttal.
 16 MR. LUETKEHANS: What? He just talked
 17 about it. He talked about Hartke --
 18 MR. BLAZER: He talked about the meeting.
 19 He didn't say anything about Mr. Hartke's complaints
 20 or his symptoms. He just talked about the --
 21 MR. LUETKEHANS: Well, but then he went on
 22 to say that Mr. Hartke's complaints and symptoms
 23 were because some -- because of this town hall
 24 meeting.

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1 MR. BLAZER: No, he never said that. He
 2 didn't say anything about Hartke other than the
 3 meeting occurred.
 4 MR. LUETKEHANS: So the only purpose to
 5 talk about Hartke was that the meeting occurred?
 6 Then why is he even talking?
 7 MR. BLAZER: Mr. Chairman, I have an
 8 objection pending. Beyond the scope.
 9 CHAIRMAN CORNALE: All right, he has
 10 alluded to you were at the hearing and you heard
 11 Hartke speak, but you didn't -- you weren't -- you
 12 weren't at the specific meeting that he spoke. So
 13 to talk about contents of that meeting, again you're
 14 not privy to that information. You were at our
 15 meeting that he spoke but not at the particular
 16 meeting in -- I believe it was last summer.
 17 A. **That is correct.**
 18 CHAIRMAN CORNALE: Okay. All right, so
 19 where exactly is our objection? What --
 20 MR. BLAZER: Well, he started asking him
 21 questions about when Mr. Hartke started complaining
 22 about symptoms. Dr. Roberts didn't say anything in
 23 his direct presentation about when Mr. Hartke
 24 started complaining about his symptoms, what his

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1 symptoms were, or anything else.
 2 **MR. LUETKEHANS:** Correct.
 3 **MR. BLAZER:** The only question about Mr.
 4 Hartke was when -- are you aware that he -- that he
 5 made a presentation at a meeting last year period.
 6 I didn't ask him any other questions nor did he
 7 testify about anything else regarding Mr. Hartke.
 8 **MR. LUETKEHANS:** So I would object to the
 9 relevance. I would object -- I would ask to strike
 10 the testimony of Mr. Hartke[sic]. If that's all
 11 he's testifying to, what's he testifying for?
 12 **CHAIRMAN CORNALE:** All right. You missed
 13 the opportunity to object to that, so --
 14 **MR. LUETKEHANS:** He then went on to talk
 15 about the fact that these people, which I assume was
 16 Mr. Hartke, were complaining because there was a
 17 town hall meeting.
 18 **MR. BLAZER:** Well, a faulty assumption is
 19 not a basis for an objection.
 20 **CHAIRMAN CORNALE:** Okay. So we're going
 21 to allow the objection and then we'll just move on.
 22 **BY MR. LUETKEHANS:**
 23 Q. Isn't it true that wind turbine hearings
 24 occur before wind turbines are actually put in

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1 place, correct?
 2 **MR. BLAZER:** Objection, beyond the scope.
 3 **MR. LUETKEHANS:** No, it's not. He talked
 4 about the hearing -- he talked about hearings, he
 5 talked about that they brought out complaints, he
 6 talked about that that was the purpose of the
 7 complaints is because other people were complaining.
 8 **MR. BLAZER:** Actually your objection to
 9 testimony in other hearings was sustained. That's
 10 why I can't get in any of the opinions regarding the
 11 experts that Punch relied on.
 12 **MR. LUETKEHANS:** What?
 13 **MR. BLAZER:** I didn't say anything
 14 about --
 15 **CHAIRMAN CORNALE:** There was rebuttal
 16 evidence that had to do with meetings associated
 17 with wind farms, so any questions in this line
 18 should be allowed, will be allowed.
 19 **BY MR. LUETKEHANS:**
 20 Q. Okay. So isn't it true that you talked
 21 about hearings occurring and that the complaints
 22 increase after these hearings, correct?
 23 **MR. BLAZER:** No, he didn't. Objection.
 24 **MR. LUETKEHANS:** He can answer the

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1 question --
 2 **MR. BLAZER:** Objection.
 3 **MR. LUETKEHANS:** -- about --
 4 **MR. BLAZER:** He didn't say anything about
 5 hearings. He talked about meetings, Mr. Chairman.
 6 **MR. LUETKEHANS:** You know what? If he
 7 wants to -- if he wants to object, he should object
 8 and he should quit coaching the witnesses.
 9 **CHAIRMAN CORNALE:** Mr. Roberts, Dr.
 10 Roberts, can you answer his question?
 11 **A. I'm not sure. Basically I was confused**
 12 **somewhat in the fact that I was talking about the**
 13 **tribunals and I don't think I can talk about those**
 14 **now, and so the point being that I was testifying**
 15 **about peer-reviewed published literature, about**
 16 **what's in the literature about wind farms and the**
 17 **complaints occurring, increasing after public**
 18 **meetings and that sort of thing. I don't know**
 19 **exactly when the hearings were for those particular**
 20 **events. I don't know that that's in the --**
 21 Q. Okay, but, as you said, hearings. In
 22 Illinois at least, before a wind turbine farm can be
 23 put in, we require a hearing, so --
 24 **MR. BLAZER:** Same objection, Mr. Chairman.

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1 **MR. LUETKEHANS:** Can I ask the question
 2 please?
 3 **MR. BLAZER:** Same objection, Mr. Chairman.
 4 I'll raise my voice as much as you do.
 5 **MR. LUETKEHANS:** Can I ask my question --
 6 **MR. BLAZER:** Except for me it's not for
 7 effect.
 8 **MR. LUETKEHANS:** -- before the objection
 9 please?
 10 **MR. BLAZER:** Beyond the scope.
 11 **MR. LUETKEHANS:** Can I ask the question
 12 please?
 13 **CHAIRMAN CORNALE:** Mr. Luetkehans, finish
 14 the question and then we'll sort through it.
 15 **BY MR. LUETKEHANS:**
 16 Q. Okay. In Illinois, wind turbine hearings,
 17 hearings like this one, occur before wind turbines
 18 are put in. Hence, under that scenario, those
 19 people have no ability to complain before the wind
 20 -- after -- I mean those hearings by definition
 21 require complaints before the wind turbines are put
 22 in, correct?
 23 **MR. BLAZER:** Objection, beyond the scope.
 24 **CHAIRMAN CORNALE:** Can you answer that

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1 question?
 2 **A. Not really.**
 3 **CHAIRMAN CORNALE:** Okay. Mr. Luetkehans,
 4 can you clarify the question to get it --
 5 **BY MR. LUETKEHANS:**
 6 Q. Okay, it's impossible for someone to
 7 complain at a hearing that occurs before a wind
 8 turbine is put in about wind turbines that are
 9 already existing -- about wind turbine effects on
 10 themselves before the wind turbines are put in.
 11 **A. That's incorrect.**
 12 Q. Okay.
 13 **A. That happened in this proceeding where at**
 14 **least two people testified they went somewhere else**
 15 **and felt the sensations of wind turbines.**
 16 Q. And let's talk about those people. You
 17 said they testified with emotion, and I would agree
 18 with you. Is there any reason that you believe that
 19 they had that emotion before going out to the wind
 20 turbine and having what they felt is an effect?
 21 **A. I have --**
 22 Q. Do you have any reason to believe they had
 23 that emotion or that emotional response before they
 24 went to the wind turbines?

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1 **A. I can't judge that without talking to**
 2 **them.**
 3 Q. Okay. And, in fact, most of those people
 4 said they were open to the wind turbines, did they
 5 not, in their testimony before going out?
 6 **A. That's what they testified to.**
 7 Q. Okay, and you have no reason one way or
 8 another to say that they were wrong or they were
 9 lying to these --
 10 **A. I would not say that they were wrong or**
 11 **they were lying.**
 12 Q. Okay.
 13 **A. I think the testimony has different**
 14 **standards than talking to a physician in the privacy**
 15 **of an exam room.**
 16 Q. And again, you didn't examine any of these
 17 people to come up with your opinion.
 18 **A. No, sir, I did not.**
 19 Q. Okay. And these people never said they
 20 had wind turbine syndrome, did they?
 21 **A. One of them did, alluded to wind turbine**
 22 **syndrome. I don't --**
 23 Q. Okay, one person --
 24 **A. -- remember the --**

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1 Q. -- out of the five.
 2 **A. I didn't go back and look specifically for**
 3 **that. I just recall that a gentleman did say that.**
 4 Q. Did the Bells say that? The Bells.
 5 **A. I don't recall.**
 6 Q. How about Mrs. Kelson?
 7 **A. I'd have to look and see. I don't recall.**
 8 Q. She didn't say it, did she? Do you recall
 9 her saying --
 10 **A. I don't --**
 11 Q. -- that?
 12 **A. I said I remember a guy saying that, a**
 13 **father. I don't remember the others using that**
 14 **term.**
 15 Q. Okay. So one of the people who you talked
 16 about used that term, not the remainder, to your
 17 knowledge?
 18 **A. I did not specifically look for that, so I**
 19 **can't testify beyond what I've said.**
 20 Q. Okay. Let's talk about you said there are
 21 wind turbine placements where no complaints exist,
 22 correct?
 23 **A. That is correct.**
 24 Q. I think it was wind turbines places, I

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1 don't mean to quote you wrong, wind turbine --
 2 places where wind turbines are where there are no
 3 complaints, correct?
 4 **A. I think I probably said wind turbine**
 5 **farms.**
 6 Q. Okay. And some of those -- are you
 7 familiar with Judith Gap?
 8 **A. No.**
 9 Q. Invenergy's project in Judith Gap?
 10 **A. No, I'm not.**
 11 Q. Okay. Are you familiar with the fact
 12 that -- is that one of the places that you say no
 13 complaints have occurred?
 14 **A. No, I don't have the data to tell you**
 15 **specific areas. I'm just telling you from**
 16 **experience that I have not heard about wind turbine**
 17 **complaints in other areas.**
 18 Q. Okay. And you don't know as you sit here
 19 today how close those wind turbines are to the
 20 residences in those other areas, correct?
 21 **A. That is correct, I have not done a --**
 22 Q. And you don't know --
 23 **A. I have not done a study of that, that's**
 24 **correct.**

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1 Q. And you don't know the noise levels at
 2 those other places, correct?
 3 **A. That is correct.**
 4 Q. You don't know how many nonparticipants
 5 live within a mile of those other places, correct?
 6 **A. As I said, I have not done a study of that**
 7 **beyond what I've said.**
 8 Q. And, in fact, the main wind turbines, the
 9 original turbines, the ones that were -- the first
 10 ones that were put in the United States were put in
 11 the California desert, correct?
 12 **A. I'm not sure about the desert. I know**
 13 **about the Altamont Pass, but we've gone through a**
 14 **number -- as I understand it, I'm not a wind turbine**
 15 **engineer, but as I look at the literature, I see**
 16 **evolution in the types of wind turbines that have**
 17 **been done over time.**
 18 Q. And they've gotten closer and closer to
 19 large population areas, to higher population
 20 density.
 21 **A. They've gotten more efficient, more**
 22 **effective, and there are more of them.**
 23 Q. Okay.
 24 **CHAIRMAN CORNALE:** Dr. Roberts, let me

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1 just remind you, and Mr. Luetkehans, remind you
 2 both, stay on focus to the testimony he presented in
 3 rebuttal. So in no way, shape or form did we talk
 4 about Judith Gap or placement of homes or to homes.
 5 He didn't allude to any of that.
 6 **MR. LUETKEHANS:** Mr. Chairman, I'm just
 7 trying to point out that his statement about wind
 8 turbines where nobody, no one -- where there's been
 9 no complaints, that we have no information as to
 10 where those are in relation to density, et cetera.
 11 And I think that's a fair statement to make or a
 12 fair question to ask and that's where we're going
 13 with these questions.
 14 **CHAIRMAN CORNALE:** All right.
 15 Q. You said -- and now I have to go a little
 16 further because you said they're getting more
 17 efficient. You're not familiar with the actual --
 18 you're not an engineer, correct?
 19 **A. I said that originally, that's correct.**
 20 Q. Okay. So you don't know what the
 21 efficiency is and how it compares to density.
 22 **A. I use that term as a lay individual.**
 23 Q. Okay. One moment, Mr. Chairman.
 24 **MR. LUETKEHANS:** Nothing further of this

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1 witness, Mr. Chairman.
 2 **CHAIRMAN CORNALE:** Thank you. All right,
 3 anyone in the audience with questions for Dr.
 4 Roberts? We've got a few here. All right.
 5 **A. I'm going to turn my back to you guys.**
 6 **CHAIRMAN CORNALE:** Yes, that's fine. All
 7 right, go ahead and please speak up since you don't
 8 have a microphone back there.
 9 **MR. CAVAZOS:** Ambiro Cavazos, Strawn.
 10 **QUESTIONS BY**
 11 **MR. CAVAZOS:**
 12 Q. I had a question. You said, you know,
 13 there's -- you need to have doctors diagnose
 14 whatever is going on with these wind turbines. Do
 15 you know of any doctor that can correctly diagnose
 16 or has diagnosed any wind -- with whatever you want
 17 to call it, problems with wind turbines?
 18 **A. I have to turn my back to you to answer**
 19 **the question because of the microphone. Let me**
 20 **clarify what I said, which is the fact that the**
 21 **symptoms that have been reported need to be**
 22 **evaluated by a physician with a clean slate. There**
 23 **is not a physician that is -- specializes in**
 24 **examining individuals for wind turbine syndrome.**

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1 **Even Dr. Nina Pierpont who kind of coined the term**
 2 **did not examine the people that she identified as**
 3 **having the syndrome. So there's not a physician**
 4 **that does that.**
 5 **What I'm saying is if you have those sort**
 6 **of symptoms you should go to the doctor, as Dr.**
 7 **Ellenbogen talked about when he testified, to make**
 8 **sure you don't have some underlying condition that**
 9 **can be treated.**
 10 Q. Okay. I guess also I got into that
 11 with -- hold on one second. I just drew a blank
 12 here. Are you saying that there's no way anyone can
 13 have negative effects from wind turbines whether
 14 it's physical or mental?
 15 **A. What I say is the fact that wind turbines**
 16 **are associated with noise; they're not associated**
 17 **with any particular disease.**
 18 Q. I guess I'm not asking about disease.
 19 Physical effects.
 20 **A. Well, you know, annoyance, I mean we**
 21 **all -- as I testified originally, we all respond to**
 22 **annoyance in different ways and specifically to**
 23 **sound. I used the example of how one sound might be**
 24 **a pleasure to one person and an annoyance to**

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1 **another. So annoyance can cause you to be -- to**
 2 **have various symptoms. It's not specific.**
 3 Q. Okay, and I think I'm probably the one who
 4 mentioned wind turbine syndrome only because I
 5 didn't know what else to call it.
 6 **A. Your name again?**
 7 Q. Ambiro Cavazos.
 8 **A. Okay, could be.**
 9 Q. I mean just to tell you before, you know,
 10 I actually --
 11 **CHAIRMAN CORNALE:** Remember, questions,
 12 questions, questions.
 13 Q. I guess that was my question is I just
 14 wanted to know if you are denying any effects, any
 15 negative effects under oath?
 16 **A. Under oath I'm saying that the data shows**
 17 **that wind turbines have been associated with**
 18 **annoyance, but there is no peer-reviewed published**
 19 **literature that documents -- that confirms that wind**
 20 **turbines are associated with a particular disease.**
 21 Q. Why aren't there more studies being done
 22 by somebody like you?
 23 **A. Well, one of the things is the fact that**
 24 **research is being done. As I pointed out, there's**

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1 **now research where they're actually taking the**
 2 **sounds from wind turbine farms and exposing**
 3 **individuals to them. A researcher named Crichton**
 4 **did it originally, and now there's been another**
 5 **study since then where they take it, put it in the**
 6 **lab so they don't see the wind turbines, they --**
 7 **they re-create that sound, if you will, in that --**
 8 **for that individual. And they've also then used**
 9 **videos and various bits of information to suggest**
 10 **adverse effects or not. And they're looking at it**
 11 **to see if that causes a -- if there's a difference**
 12 **in the reporting of symptoms after that.**
 13 **Number one is they don't see an increase**
 14 **in symptoms in people exposed to the sound of wind**
 15 **turbines in those situations. And what they do see**
 16 **is an association with the nocebo effect, a negative**
 17 **message going into that test.**
 18 Q. Just one last question. Can those
 19 laboratories produce the same infrasound as wind
 20 turbines?
 21 **A. To my -- and I'll leave that to**
 22 **acousticians to answer for sure. They've taken**
 23 **recordings from wind farms and they've also done the**
 24 **measurements of pressure to simulate -- or it's not**

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1 **actually simulated, it's bringing that noise into**
 2 **the laboratory.**
 3 Q. I take that as a yes.
 4 **A. That is a yes.**
 5 **CHAIRMAN CORNALE:** All right, I'm going to
 6 stop you right there. He has not testified to
 7 anything regarding infrasound and anything that you
 8 allude to him with infrasound --
 9 **MR. CAVAZOS:** Well, he brought it up.
 10 **CHAIRMAN CORNALE:** -- in rebuttal. So you
 11 can go ahead if you have another question.
 12 **MR. CAVAZOS:** Well, I thank you, but he
 13 brought that up. That's the only reason I asked
 14 about it. Thank you.
 15 **CHAIRMAN CORNALE:** All right. Any others
 16 in the audience with questions?
 17 **MR. SLAGEL:** John Slagel.
 18 **QUESTIONS BY**
 19 **MR. JOHN SLAGEL:**
 20 Q. You said -- I need a little background, so
 21 bear with me a little bit. Basically I asked Mr.
 22 Hankard one time about the California Ridge study.
 23 I asked him if the residents ever recorded
 24 complaints when the turbines were shut down

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1 suggesting the nocebo effect. And his reply was:
 2 No, I was actually supplied whenever -- when we were
 3 doing our study, one of the residents complained
 4 about noise. I was always given that information
 5 and I compared it to the turbine operations and the
 6 noise levels that we were measuring at the time, and
 7 I found that they were -- they understood when the
 8 turbines were working. They did not complain when
 9 the turbines weren't working.
 10 So then I answered -- asked him a
 11 question. I said: Okay, so there was no nocebo
 12 effect going on with those residents? To which Mr.
 13 Blazer objected and said: I have to object again.
 14 It's beyond the scope of this witness's testimony.
 15 We haven't established that this witness knows what
 16 the nocebo effect is. That was Mr. Robert's
 17 testimony.
 18 **CHAIRMAN CORNALE:** All right, let me
 19 remind you that this is a rebuttal. Do you have a
 20 question that you're getting to?
 21 **MR. JOHN SLAGEL:** Yes, I do.
 22 **CHAIRMAN CORNALE:** We have the
 23 transcripts.
 24 **MR. JOHN SLAGEL:** Okay, right.

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1 **BY MR. JOHN SLAGEL:**
 2 Q. Well, then I would ask what's the answer
 3 to that question, which is when the residents from
 4 California Ridge called in and complained that
 5 turbines were operating or they called in and
 6 complained of noise complaints while Mr. Hankard's
 7 instruments were measuring the sound and they didn't
 8 find it above IPCB levels. Was there a nocebo
 9 effect going on there?
 10 **A. In that situation, they're not measuring**
 11 **nocebo. Nocebo could be a factor in that, in the**
 12 **fact of they called in in the first place, but the**
 13 **thing is it's really more a correlation. When are**
 14 **the complaints, when do they occur, and when are the**
 15 **wind turbines functioning? So it's really more a**
 16 **correlation and not necessarily a nocebo.**
 17 **MR. LUETKEHANS:** John, let me interrupt.
 18 I think it will be easier for her if you stand
 19 somewhere where she can see you.
 20 **MR. JOHN SLAGEL:** Oh, okay.
 21 **MR. LUETKEHANS:** She's trying to read you
 22 and --
 23 **MR. JOHN SLAGEL:** I'll come over here next
 24 to you.

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1 **BY MR. JOHN SLAGEL:**
 2 Q. Okay, so then in the California Ridge
 3 study, did -- would you say the noise complaints
 4 correlated with turbine operation?
 5 **A. The scenario that you've described I would**
 6 **say correlated. I have not looked at the data. I**
 7 **would have to look at the data to say that -- to**
 8 **make any determination about the whole project. The**
 9 **scenario that you've described, I would say there is**
 10 **a correlation, but I can only respond to what you've**
 11 **said.**
 12 Q. Okay. Did you read the entire Cooper Cape
 13 Bridgewater study?
 14 **A. I can't say that I read every bit of it**
 15 **because one of the things is about the sound part.**
 16 **I'm not an acoustician. And so I look at it, I**
 17 **under -- I try to understand it, I look at the**
 18 **graphs and try to understand those, and go more to**
 19 **the health and sensation issues, but I looked at**
 20 **every page and tried to read some on every page.**
 21 **MR. John SLAGEL:** Okay, thank you.
 22 **CHAIRMAN CORNALE:** Anybody else in the
 23 audience with questions? Oh, Mr. Hayes, why don't
 24 you come on up.

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1 **MR. LUETKEHANS:** How about he can use this
 2 mic.
 3 **CHAIRMAN CORNALE:** All right, that'll be
 4 fine. All right, go ahead, Mr. Hayes.
 5 **QUESTIONS BY**
 6 **MR. HAYES:**
 7 Q. John Hayes. Just a couple quick
 8 questions. You said there was no correlation
 9 between sensation and turbines?
 10 **A. Excuse me, please ask the question again.**
 11 **I got interrupted here. He like to fell over.**
 12 **MR. LUETKEHANS:** No, John, keep going.
 13 Q. Oh, okay. You made a statement that there
 14 was no correlation between sensation and turbines in
 15 the Cape Bridgewater study; is that correct?
 16 **A. I'm saying that there is not solid**
 17 **evidence of correlation, that's correct.**
 18 Q. So are you saying there is some evidence
 19 of correlation?
 20 **A. As we -- as we pointed out, there's some**
 21 **things that are correlated with wind turbines, but,**
 22 **for example, the complaints did not always occur,**
 23 **the severity, he rated the severity up to five, and**
 24 **they didn't always associate with the wind turbines,**

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1 **and he didn't do a statistical analysis of it.**
 2 Q. You know, in the -- I didn't bring it up
 3 here with me, but how do you account for, then, the
 4 diary entries showing the highest severity ratings
 5 of four to five when the turbines were either
 6 starting up, stopping or changing their power by 20
 7 percent output? How did these people know that when
 8 they couldn't see or hear them?
 9 **A. I don't know that they couldn't see or**
 10 **hear them. Did you see that in the report for**
 11 **those --**
 12 Q. Yes --
 13 **A. -- particular sites?**
 14 Q. -- it's in the report.
 15 **A. Okay.**
 16 Q. Steven Cooper's report.
 17 **A. The second thing is that it's -- I'm not**
 18 **an engineer with wind turbines, so I can't answer**
 19 **what the sound levels are when they start up or when**
 20 **they're slowing down by 20 percent I think is the**
 21 **term that -- the fraction that he used. I can't**
 22 **answer that.**
 23 Q. Okay. Another statement you made was that
 24 no disease has ever been shown to be caused by wind

1 turbines, correct?

2 **A. I said there's no recognized disease**
3 **associated with wind turbines.**

4 Q. Would you agree that noise from any
5 source, including wind turbines, has the ability to
6 disrupt sleep?

7 **A. It all depends on the study and the type**
8 **of noise that you're talking about, but it has been**
9 **shown in some levels, that's correct.**

10 Q. And would you agree that if a person's
11 sleep is disrupted that this could be harmful to
12 their health?

13 **A. It's a possibility.**

14 Q. So kind of in summary, even though
15 turbines have never been shown to cause a disease
16 doesn't mean that they are necessarily completely
17 safe and harmless as far as a person's health goes.

18 **A. Epidemiology and science cannot prove the**
19 **negative ever, and so if there -- you know, if it is**
20 **not causing a disease, it is not causing a**
21 **condition, you can't prove it doesn't. One question**
22 **was asked earlier about further research. Research**
23 **will continue until science decides there's not an**
24 **association, there's not a disease, and that's the**

1 **that you have to sit down and talk with the**
2 **individual and find out what they really think about**
3 **wind turbines, and so one individual doesn't make a**
4 **disease.**

5 Q. But wouldn't one person be important?

6 **A. Every person is important.**

7 **MR. HAYES:** Thank you.

8 **CHAIRMAN CORNALE:** Anybody else in the
9 audience with questions for Dr. Roberts? We've got
10 one over here. Why don't you come on up so we can
11 hear you. Are you afraid? Yeah, okay, do your
12 best.

13 QUESTIONS BY

14 **MS. KELSON:**

15 Q. Paula Kelson. You said you heard my
16 testimony. Since you are a doctor, can you explain
17 what it was that caused the pressure in my neck when
18 I visited the turbines?

19 **A. No, I can't. I think that it depends on**
20 **the type of pain you had. I think your son had --**

21 **MR. BLAZER:** Doc, she can't hear you.

22 **A. Oh, okay. And I think that your son had**
23 **told you that he had a similar feeling. I don't**
24 **know what it is. It could be muscle, it could be**

1 **way it is. I mean that's the way it's been with**
2 **every disease that we have now.**

3 **And the thing is there are many diseases**
4 **that are brought up that are published about early**
5 **on, observations maybe like Cooper has made, and**
6 **science has gone in and looked at it and said**
7 **there's not an association, there's not a disease**
8 **there. So it's not a recognized disease.**

9 Q. Have you ever interviewed anyone who did
10 not, in your opinion, have a nocebo effect who
11 indicated that turbines cause sensations or other
12 effects on them?

13 **A. No. Basically the people I talked to were**
14 **not interviews, they were people like in the**
15 **audience, and I just listened. I didn't make a**
16 **value judgment.**

17 Q. Would it surprise you if you did find
18 someone like that?

19 **A. Find somebody like what?**

20 Q. Someone who really doesn't have an opinion
21 towards turbines who just suddenly after they came
22 in contact with them in some way reports something
23 negative about them? Would that surprise you?

24 **A. You know, one of the things is the fact**

1 **tension, you can get tension headaches and --**

2 Q. I don't.

3 **A. Well, I'm saying some people do. And so**
4 **that's not specific for any particular exposure that**
5 **I'm aware of.**

6 Q. Would it be because I either feel for or
7 against turbines? Is that what would be the root of
8 it?

9 **A. No, I think -- I'm not saying that your**
10 **head makes your neck hurt, okay, your brain. What**
11 **I'm saying is the tension associated with the strain**
12 **of being concerned may actually cause tension.**

13 Q. So you're saying I felt the nocebo effect?

14 **A. No. I'm saying you felt a feeling in your**
15 **neck. One of the things is there's really confusion**
16 **about nocebo effect. Nocebo effect is a person, if**
17 **you think it's a negative outcome, you're more**
18 **likely to not agree. I'm giving you an aspirin for**
19 **a headache. If you think that aspirin is going to**
20 **help your headache, it has a better chance of you**
21 **feeling better.**

22 Q. So --

23 **A. If you don't feel, you say, oh, he just**
24 **gave me an aspirin, I always take Excedrin, that's a**

1 **negative, that's a nocebo, and so you're less likely**
2 **to feel improvement with that aspirin because you**
3 **really thought I ought to use something more**
4 **powerful. So that's the nocebo effect.**

5 Q. I believe in my testimony I said I was not
6 expecting to feel anything at all, but when I went
7 there, I felt very obvious pressure in my neck and
8 in my ears. I -- from that point on, I became
9 concerned about it. Would you be surprised -- or if
10 it's based on the tension from the windmills, I
11 don't believe I had much tension at that point from
12 the windmills. But the other person that was with
13 me that agreed there was a real physical effect is
14 pro-wind. What would be causing that for him?

15 **A. Well, number one is why did you go there?**

16 Q. I wanted to see what they looked like
17 visually. I did not -- I did say that I had felt a
18 minor possible ringing when I left another turbine
19 from another place. I did not know if that was
20 repeatable. It was not. When I went up there, I
21 did not feel that again.

22 **A. Okay, had you --**

23 Q. I felt something totally different.

24 **A. Excuse me. Had you looked on the Internet**

1 went up there to visit them was that it's a nice day
2 outside, let's go play freeze tag in the fields and
3 the ditches and let's go look at these things. Look
4 at them. Even though I don't feel this way: Wow,
5 this is incredible. That's the way we presented it
6 to our kids so that I could get a true test. And it
7 did not affect them all, but it obviously affected
8 one.

9 **A. But one of the things that I was --**

10 **CHAIRMAN CORNALE:** Let me stop here. Let
11 me just remind everybody that this is the rebuttal
12 portion of this. Ms. Kelson, do you have a specific
13 question based on his rebuttal testimony that maybe
14 we can get to?

15 Q. My main question was if a pro-wind person
16 could experience a tension headache caused by a
17 nocebo or placebo or whatever effect you want to
18 call it by being tense around them, if that could
19 cause pressure in the ears?

20 **A. We are all human beings and you went there**
21 **for a reason. It was just in the mind about what am**
22 **I feeling. And so I can't say it wouldn't happen.**
23 **You don't make a determination about causation for a**
24 **whole group of people based on one observation.**

1 **about symptoms about wind turbines? Had you**
2 **researched about wind turbines?**

3 Q. I'm trying to remember. I don't believe I
4 did. And I did not listen to Ted Hartke's talk. I
5 only mention that because that would have been the
6 only thing that I would have heard about. I heard
7 about him, but I did not hear what specifically he
8 was feeling.

9 **A. Right, so you went in with some sort of**
10 **idea, and so I can't dissect what you individually,**
11 **what -- why that happened, but this is the sort of**
12 **interaction that I'd have with an individual who, if**
13 **we're sitting without all these other people**
14 **watching, is to talk to you about that, what did you**
15 **have, had you looked at information, had -- you**
16 **know, that sort of thing. It's all --**

17 Q. I can say --

18 **A. -- part of it.**

19 Q. -- that I don't believe that I had any
20 information at that point. And my son, my
21 six-year-old son had not looked at any.

22 **A. Certainly had not. I would hope not.**

23 Q. And we had not talked about it in front of
24 him to my knowledge. How we presented it when we

1 Q. So this other person is the key. If this
2 other person who was pro-wind was not expecting to
3 feel anything and yet he did, where did that come
4 from?

5 **A. I have no idea.**

6 Q. I don't either. Or, no, I do.

7 **A. Okay.**

8 **MS. KELSON:** Okay, I think -- I think
9 you've answered my question.

10 **CHAIRMAN CORNALE:** Thank you. Anybody
11 else in the audience with questions? Oh, we've got
12 one.

13 **MR. KNAUER:** I just have one question.
14 Steve Knauer.

15 **QUESTIONS BY**

16 **MR. KNAUER:**

17 Q. There's been a lot made of the nocebo
18 effect. Would it not be fair to say that the
19 opposite, the placebo effect, also holds true for
20 people that do not make complaints? They're
21 receiving financial gain or something like that that
22 makes them accept these things.

23 **A. It's very possible because, as I said, if**
24 **there's negative feelings about it, it goes one way.**

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1 **If there's positive feelings, whatever the root of**
 2 **those positive feelings are, that's a possibility.**
 3 Q. But there's no way of measuring that,
 4 correct?
 5 **A. Well, I mean I think the papers that are**
 6 **beginning to come out now, Crichton, Knopper, and**
 7 **Maffulli out of Italy, are beginning to gather**
 8 **information about the psychiatric aspects of health**
 9 **complaints period. But I would agree with you that**
 10 **nocebo effect and placebo effect go in opposite**
 11 **directions and have different factors.**
 12 **MR. KNAUER:** Okay.
 13 **CHAIRMAN CORNALE:** Anybody else in the
 14 audience with questions?
 15 QUESTION BY
 16 **MR. DAVID SLAGEL:**
 17 Q. David Slagel, Fairbury. So if I hate
 18 cancer and then I end up getting cancer, does that
 19 make it any less of a disease?
 20 **A. Absolutely not.**
 21 **MR. DAVID SLAGEL:** Thank you.
 22 **CHAIRMAN CORNALE:** All right, any other
 23 questions?
 24 **A. There's one over here.**

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1 **CHAIRMAN CORNALE:** I've got one here.
 2 **MR. MAUBACH:** Ed Maubach.
 3 **CHAIRMAN CORNALE:** No, come on up. I need
 4 to be able to hear you. Mr. Maubach, what was your
 5 first name again?
 6 **MR. MAUBACH:** Ed.
 7 **CHAIRMAN CORNALE:** Ed. Mr. Luetkehans
 8 represents you.
 9 **MR. MAUBACH:** So I'm not a human being
 10 anymore?
 11 **CHAIRMAN CORNALE:** Anybody else in the
 12 audience? Not represented by Mr. Luetkehans, let me
 13 be clear. Anybody else?
 14 All right. ZBA, do we have any other
 15 questions of Dr. Roberts at this point in time?
 16 We're good. County staff? County counsel? County
 17 staff, county counsel? All right. Dr. Roberts,
 18 thank you.
 19 All right, it's 20 after 9:00.
 20 **MR. BLAZER:** He won't be done in ten
 21 minutes.
 22 **CHAIRMAN CORNALE:** I'm sure of that.
 23 **MR. BLAZER:** I can barely get his name out
 24 in ten minutes.

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1 **CHAIRMAN CORNALE:** Should we talk for 20
 2 minutes and then -- or should we just go ahead and
 3 end tonight and start fresh --
 4 **MR. BLAZER:** It's up to you.
 5 **CHAIRMAN CORNALE:** -- on Wednesday?
 6 **MR. BLAZER:** Right now we have for
 7 Wednesday also Mr. MaRous, and given the length of
 8 his reports, I have a feeling the cross-exam,
 9 despite Mr. Luetkehans's prior relationship with Mr.
 10 MaRous, will be rather lengthy.
 11 **MR. LUETKEHANS:** Well, let's try and take
 12 a few more shots while we're just saying something
 13 that makes no sense please.
 14 **CHAIRMAN CORNALE:** All right.
 15 **MR. BLAZER:** In any event, and then I
 16 have --
 17 **MR. LUETKEHANS:** He's got 70 pages, let's
 18 talk about that.
 19 **MR. BLAZER:** I'm concluding with Mr.
 20 Parzyck, so --
 21 **CHAIRMAN CORNALE:** All right. Why don't
 22 you -- why don't you start, give us a little bit,
 23 get to some kind of natural break in your
 24 presentation, and we'll settle. That'll be our best

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1 use of time.
 2 **MR. BLAZER:** You're assuming I have a
 3 natural break.
 4 **CHAIRMAN CORNALE:** Yeah. If not, you'll
 5 make one.
 6 **MR. BLAZER:** I'll do my best.
 7 **CHAIRMAN CORNALE:** Because we will have to
 8 discuss the motion as well on Wednesday. For those
 9 of you here, our next meeting is Wednesday, the
 10 29th, 6:30, and it's here. And for those that might
 11 have missed earlier, there's a meeting on May the
 12 7th, it's at seven o'clock and it's here, because
 13 we've got another meeting to take care of at 6:30.
 14 All right.
 15 **MR. BLAZER:** All right, thank you.
 16 (Mr. Michael Hankard called as rebuttal
 17 witness.)
 18 QUESTIONS BY
 19 **MR. BLAZER:**
 20 Q. Very quickly first, Mr. Hankard, you were
 21 asked some questions earlier about Exhibit 16B and
 22 to some extent 16A and the relationship between
 23 those and specifically whether or not, and I think
 24 this was from Mr. Cornale, when you show with the

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1 latter parts of 16B, the analysis with the
 2 additional LNTE turbines, whether or not you show 41
 3 dB at a particular receptor, that's the maximum that
 4 could ever -- that's the maximum noise level at 1000
 5 hertz that could ever be received at that residence.
 6 Is that, in fact, the maximum that could ever be
 7 received?
 8 **A. Based on our modelling and our --**
 9 **MR. LUETKEHANS:** Objection. What is this
 10 rebutting? His own testimony?
 11 **MR. BLAZER:** It's clarifying.
 12 **MR. LUETKEHANS:** No, it's --
 13 **MR. BLAZER:** The rule is to clarify,
 14 explain --
 15 **MR. LUETKEHANS:** His own testimony?
 16 **MR. BLAZER:** -- rebut, modify. This was
 17 in response to questions from the ZBA.
 18 **MR. LUETKEHANS:** So? It's his testimony.
 19 **CHAIRMAN CORNALE:** Regardless of what the
 20 rules say, I do want to hear the answer to this.
 21 This was my question. If we're changing our
 22 testimony, let's hear it.
 23 **MR. BLAZER:** I don't believe he is
 24 changing, but I --

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1 **MR. LUETKEHANS:** Do you want to testify or
 2 do you want to ask questions?
 3 **MR. BLAZER:** Fortunately you don't make
 4 the rules.
 5 **BY MR. BLAZER:**
 6 Q. Go ahead, Mr. Hankard, answer the
 7 question.
 8 **A. Could you repeat the question or at least**
 9 **the last part of it?**
 10 Q. Sure, sure. At any particular receptor in
 11 the last couple of pages of 16B, you show 41 dB at a
 12 few receptors. In the real world when this
 13 project -- assuming this project begins operating,
 14 are you saying that's the maximum that can happen?
 15 **A. It's -- you know, again, we -- I expect it**
 16 **to be actually about 2 dB louder than what we**
 17 **measured.**
 18 Q. What's 2 dB louder?
 19 **A. At 1000 hertz, the -- given the fact that**
 20 **we predict 41 but I think the model is**
 21 **overpredicting by 2, then the maximum I ever expect**
 22 **to actually occur is 39.**
 23 Q. And could you explain how you get that 2
 24 dB -- first of all, how do we get to 41 if that's

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1 not, in fact, the real world?
 2 **A. Well, I mean --**
 3 **MR. LUETKEHANS:** Objection, beyond the
 4 scope. This is not rebuttal anymore. I don't know
 5 what this is.
 6 **CHAIRMAN CORNALE:** Mr. Hankard, just go
 7 ahead and continue with this. This is important to
 8 the hearing process.
 9 **MR. LUETKEHANS:** You know what, I agree
 10 it's important, but it's also their burden and they
 11 should have raised it in the first hearing, in the
 12 first set of opportunities instead of in rebuttal.
 13 **MR. BLAZER:** This is in response to
 14 questions that were raised this evening.
 15 **CHAIRMAN CORNALE:** These questions were --
 16 due to the process, these questions were raised in
 17 questions, so these are fair questions to ask and
 18 answer at this point. Plus they are our questions,
 19 so --
 20 **MR. BLAZER:** Yes.
 21 **A. Well, I believe your question was how did**
 22 **we get to 41?**
 23 Q. How do you explain the 2 dB difference
 24 between what your model shows and what you're saying

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1 will be the real world level between 41 and 39?
 2 **A. We get to the 41 vis-a-vis the**
 3 **conservative nature of the predictions and**
 4 **comparison of those, of that method that we used, in**
 5 **comparison to what we measure at Cal Ridge shows**
 6 **that the model is overpredicting by 2. So the**
 7 **difference is a model that is based on assumptions,**
 8 **we made very conservative assumptions, and 39 is**
 9 **reality.**
 10 Q. All right.
 11 **A. Hopefully that answers the question.**
 12 Q. It does answer my question. Let's go to
 13 the Cape Bridgewater study. I'll leave the full
 14 copy up there because we're not going to get to
 15 cross-exam today, but I'll leave it up here anyway.
 16 Did you review Jerry Punch's testimony
 17 regarding the Cape Bridgewater study?
 18 **A. Yes, I have.**
 19 Q. Have you reviewed the study?
 20 **A. I have reviewed the study in depth, yes.**
 21 Q. Okay. And I'll ask you the same question
 22 I asked Dr. Roberts. Mr. Punch stated that the
 23 study provides definitive proof that wind turbines
 24 absolutely cause symptoms in some of the wind farm

1 residents. Do you agree with that statement?

2 **A. Well, I'll keep my answers based on**
3 **acoustics and levels, and based on the levels that**
4 **were measured and reported in this study, they do**
5 **not surpass even the levels of hearing in any way,**
6 **shape or form. And so I guess if you can't hear it,**
7 **then it would be hard for me to understand how it**
8 **could have an effect.**

9 Q. Okay, could you explain the basis for your
10 disagreement with Mr. Punch's opinion?

11 **A. I guess Mr. Punch apparently just takes**
12 **the --**

13 **MR. LUETKEHANS:** Objection as to what Mr.
14 Punch apparently does.

15 **CHAIRMAN CORNALE:** All right, Mr. Hankard,
16 can you just answer the question without adding what
17 you feel Dr. Punch does or does not do?

18 **A. Yes, if you'd give me just a moment here.**
19 **Well, Mr. Punch, I have some of his testimony here,**
20 **and he says the most important fact determined by**
21 **the study is there's now definitive proof that wind**
22 **turbines absolutely do produce or cause physical**
23 **symptoms in some wind farm residents. By the**
24 **author's own admission, there was never a -- it was**

1 **with noise. They tried dB(A), dB(C), dB(A) minus**
2 **dB(C), third octave. They tried to match up the**
3 **diaries with all the noise levels and they say as**
4 **much there. It did not correlate. The same with**
5 **vibration.**

6 **So then what they did was they said let's**
7 **take a look at all of the times when the people**
8 **reported a five out of five sensation, which they**
9 **define as a severe, well, sensation, severe**
10 **sensation as they define that as headaches,**
11 **dizziness, et cetera. So when these people reported**
12 **a five and they were experiencing sensations, this**
13 **report says that that correlated to those four**
14 **different turbine operations that Mr. Luetkehans**
15 **mentioned: either seeking to start up, changing up**
16 **or down 20 percent, or being above I think it was 12**
17 **meters per second.**

18 **But I don't know how they use the word**
19 **correlation because I went through the graphs and**
20 **there are many times, and I've got a list of**
21 **specifics, that the turbines were completely off and**
22 **these people were reporting a five. I -- I fail to**
23 **see how that's correlation.**

24 Q. Any other aspects of this report that you

1 **never their intent to investigate health effects, so**
2 **I don't know how Jerry Punch makes that statement.**

3 **MR. LUETKEHANS:** Objection, he's not a
4 doctor. Now he's talking about medical testimony.
5 No foundation, no basis.

6 Q. Does the paper --

7 **MR. LUETKEHANS:** Can I have a ruling on
8 the objection please?

9 **CHAIRMAN CORNALE:** All right. We can't
10 allow you to report medical definitions, but at the
11 same time we will let the record indicate that Punch
12 is not an M.D. either. He has a Ph.D. in another
13 field not medicine.

14 **BY MR. BLAZER:**

15 Q. Let's talk about your opinion in this
16 study regarding a correlation between the wind
17 turbines and sensations. Is it -- is it your
18 opinion that this study, in fact, establishes a
19 correlation between anything regarding wind turbines
20 and, quote, unquote, sensations?

21 **A. It -- it is not my -- it is my opinion**
22 **that this report has shown no correlation. Let's**
23 **start with the noise levels. They come right out**
24 **and say that they could not correlate the diaries**

1 -- that in your opinion impact on the conclusion
2 that there was any kind of correlation?

3 **A. Well, again, back to noise levels, it was**
4 **interesting that they had a note in here, and it was**
5 **supported by the charts, that one of the problems**
6 **they had with measuring noise inside the homes was**
7 **that the levels were so low that their instruments**
8 **were bottoming out. A noise meter has what's called**
9 **a noise floor, it will only go so low due to the**
10 **electronics inside, and that noise floor is usually**
11 **around 18, 20 dB or dB(A), which is extremely quiet.**
12 **I mean we would all be thrilled with that kind of**
13 **environment to sleep in generally speaking. And so**
14 **they were -- that was a problem is that the levels**
15 **were so low.**

16 Q. Could you give us some examples of
17 specific locations where there was an absence of
18 correlation between wind turbine operations and
19 these so-called sensations?

20 **A. Yeah, I did make some -- I just looked**
21 **through the graphs in the appendix. I have, for**
22 **example, in -- at house 88 -- there were three**
23 **homes. They labeled them 87, 88, 89. At house 88,**
24 **and this is reported in Appendix K in the document,**

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1 for example, on May 5th, 2014, at 2:00 p.m. they
 2 reported a five and the turbines were operating at
 3 less than 10 percent capacity, which in my
 4 experience they're barely moving. There was May
 5 10th at 6:00 a.m. through May 11th at 10:00 p.m., in
 6 all of those cases they reported a five and in all
 7 of those cases the turbine operations were less than
 8 10 percent.
 9 Q. How about at house 87?
 10 A. Yeah, and so, you know, one of the
 11 residents had been reported as being hypersensitive
 12 I guess you could say, but -- so I looked at 87
 13 because that was not that resident, this is
 14 theoretically not the supersensitive person, and at
 15 noon on May 8th they reported a five, and in this
 16 case the plant, the chart as far -- it was basically
 17 off, the plant was putting out no power at that
 18 time.
 19 And on May 6th, they reported a four, so
 20 now it's a four out of five on severity, but if you
 21 read the definition of four, that's -- I forget the
 22 exact definition, but it was impactful, it was loud
 23 and they could hear it and it was impactful. The
 24 plant at that time was outputting 2 kilowatts, which

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1 out of a 58 megawatt total capacity is like .003
 2 percent, I mean essentially off.
 3 MR. BLAZER: This might be a good time to
 4 break, Mr. Chairman. I think I just found a natural
 5 break.
 6 CHAIRMAN CORNALE: All right, I knew you
 7 would come through for me on that. All right. So
 8 just a reminder, we'll meet again on Wednesday, the
 9 29th, 6:30, here. We meet May the 7th. The meeting
 10 will be at 7:00 and it will be here. Wednesday
 11 night we'll talk about the Maier, we're going to
 12 make a final ruling on the motion for the Maier, and
 13 we hope to make a ruling on the UCLC motion that has
 14 been filed as well. Anything else?
 15 MR. BLAKEMAN: On the county website there
 16 will be a list set forth for those individuals who
 17 are entitled to make closing arguments. I provided
 18 it to the attorneys already, but everybody please
 19 scrutinize and make sure we haven't left anybody
 20 out. Or if somebody thinks there's somebody on
 21 there that shouldn't be, let me know.
 22 CHAIRMAN CORNALE: I think we did a good
 23 job, too, tonight with our rebuttal working through
 24 that process. I think everybody understands it now,

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1 we've got a good feeling for how that works, so
 2 we'll keep up with that.
 3 With that, I need a motion for recess.
 4 MR. VITZTHUM: I'll make that motion.
 5 CHAIRMAN CORNALE: All right, Vitzthum
 6 motions.
 7 MS. HUISMAN: I'll second.
 8 CHAIRMAN CORNALE: All right, Huisman
 9 seconds. All in favor?
 10 ALL MEMBERS: Aye.
 11 CHAIRMAN CORNALE: Opposed? Thank you.
 12 (Adjourned at 9:36 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 Livingston County Historic Courthouse, 112 West
 9 Madison Street, Pontiac, Illinois, on April 27,
 10 2015.
 11 That the said testimony was taken down in
 12 stenograph notes and afterwards reduced to
 13 typewriting under my instruction and that the
 14 transcript is a true record of the testimony given.
 15 I do further certify that I am a
 16 disinterested person in this cause of action; that I
 17 am not a relative, or otherwise interested in the
 18 event of this action, and am not in the employ of
 19 the attorneys for either party.
 20 IN WITNESS WHEREOF, I have hereunto set my
 21 hand and affixed my notarial seal this 12th day of
 22 May, 2015.
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