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SOLAR PANEL HEARING

APPEARANCES: MS. COURTNEY KENNEDY
Attorney at Law
On behalf of the Petitioner

MR. ANDREW KEYT
Attorney at Law
On behalf of the County

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1 (Monday, December 11, 2023, at 9:00 a.m.)

2 WHEREUPON, THE FOLLOWING PROCEEDINGS WERE HELD:

3 MR. FOUREZ: This meeting will come to
4 order, please. We'll open the meeting roll call with
5 the committee members. I'll do the roll call.

6 Harold Puzey.

7 MR. PUZEY: Here.

8 MR. FOUREZ: Chris Crawford. Curt
9 Elmore.

10 MR. ELMORE: Yep.

11 MR. FOUREZ: Adrian Greenwell.

12 MR. GREENWELL: Here.

13 MR. FOUREZ: Russel Rudd.

14 MR. RUDD: Here.

15 MR. FOUREZ: Five present. One absent.

16 Moving on down the agenda. We have -- the
17 committee members here have the agenda in front of
18 them. I need a motion to approve the agenda as
19 presented.

20 MR. ELMORE: I make a motion.

21 MR. FOUREZ: Curt. I need a second.

22 MR. GREENWELL: Second.

23 MR. FOUREZ: Adrian. Discussion.

24 Seeing none. All in favor say I.

1 MR. ELMORE: I.

2 MR. GREENWELL: I.

3 MR. PUZEY: I.

4 MR. RUDD: I.

5 MR. FOUREZ: Opposed? We have an
6 agenda.

7 Next item to consider and discuss and vote on
8 and the hearing rules. Committee members should have
9 a copy of the hearing rules in front of them. Need a
10 motion to approve the hearing rules as presented.

11 MR. GREENWELL: So moved.

12 MR. FOUREZ: Adrian. Russ seconds. Any
13 discussion on the rules? Seeing none. All those in
14 favor say I.

15 MR. ELMORE: I.

16 MR. GREENWELL: I.

17 MR. PUZEY: I.

18 MR. RUDD: I.

19 MR. FOUREZ: Opposed? We have rules for
20 the hearing.

21 Next item, we have -- you should have minutes
22 in front of you from the last meeting in front of the
23 committee. I need a motion to approve the minutes and
24 place them on file. Harold moves.

1 MR. ELMORE: I second.

2 MR. FOUREZ: Curt seconds. All in favor
3 say I.

4 MR. ELMORE: I.

5 MR. GREENWELL: I.

6 MR. PUZEY: I.

7 MR. RUDD: I.

8 MR. FOUREZ: Opposed? Minutes are to be
9 put on file.

10 Next item is a public hearing in
11 consideration of the petition recommendation on
12 application of Mural Energy to construct and operate a
13 commercial solar energy facility approximately 180
14 megawatts, 1,433 acres located on private agricultural
15 land in Jamaica Township, Vermilion County.

16 Andrew, did you have some comments you want
17 to make at this time?

18 MR. KEYT: Yes, just very -- very
19 generally before I turn it over to Mr. Kains who is
20 the hearing facilitator.

21 Can everybody hear me okay hopefully, okay.

22 A couple things to note is that as you're
23 coming up to either ask questions of a witness, if
24 you're going to do that, and, again, every member of

1 the public has a right come up and ask a question of a
2 witness, regardless who that witness is, there is a
3 seat up here up in the upper left-hand corner to you
4 folks that is -- has a microphone. I'll show you how
5 to use that microphone when you get up here.

6 Essentially you press the blue button at the top. You
7 can lock the blue button that will leave the mic on.
8 Witnesses will testify from up here at this podium.

9 There are two items that I'm going to just
10 bring to your attention very briefly. One is public
11 comment is allowed during the hearing. Towards the
12 end of the hearing we will get to your public comment
13 that is related to the project itself. If you want to
14 make public comment about something unrelated to the
15 project there is another opportunity for that public
16 comment after we've gone through this particular
17 hearing. You'll notice it on the agenda, it's towards
18 the end of the agenda before adjournment. There is an
19 opportunity to make public comment that may not be
20 related to the project itself. Also keep in mind
21 public comment is separate and distinct whether it's
22 about this project or not. If you have -- it is
23 separate and distinct from testimony or evidence that
24 you might be putting into the record, we will get to

1 that portion. If people want to put in evidence or
2 testimony about the project, this particular project,
3 we will get to that portion once the applicant has
4 gone through their witnesses, but evidence and
5 testimony related to the project is different than
6 just public comment, because public comment doesn't
7 necessary -- will not be considered by the board, it
8 is only the evidence and testimony that you're wanting
9 to put in which you're -- everyone will have an
10 opportunity to do in relation to this project.

11 So those are the only two comments I wanted
12 to make. With that I will turn it over to Mr. Kains
13 or back to the Chair, if you will.

14 MR. KAINS: All right. Well, I'll
15 just -- I'll just introduce myself. Thank you,
16 Mr. Keyt. Mr. Chairman. Good morning ladies and
17 gentlemen. My name is Scott Kains and I am an
18 attorney in Springfield and my job is to serve as the
19 hearing facilitator or hearing officer for this public
20 hearing. I have conducted numerous public hearings in
21 counties all around downstate Illinois and this is
22 probably my twelfth public hearing that I have
23 presided over. My job is to make sure the hearing
24 runs smoothly, that it is conducted fairly, that

1 persons who have something to say are heard. That's
2 my only job. Make sure that this is fair and that
3 people who want to say something are allowed to say
4 something. As Mr. Keyt expressed earlier, if you have
5 questions for witnesses, you may ask those questions.
6 There are some guidelines as well. My other job is to
7 rule on objections by any attorneys who are present.
8 As I see it right now, it looks like the applicant is
9 the only one who has an attorney, unless there is
10 another attorney in the room. I guess I'll ask that.
11 Are there any other attorneys in the room besides
12 Ms. Kennedy for the applicant, Mr. Keyt for the county
13 and myself? That's not bad. You folks survive with
14 only three attorneys in the room.

15 My other job is to rule on the admissibility
16 of evidence. Ms. Kennedy and the applicant will have
17 documents that need to be considered. I will allow or
18 not allow the admission of these documents, and any
19 document that is admitted into the record will be
20 presented to committee members and ultimately the
21 County Board.

22 With that said, it is time for the reading of
23 rules and procedures of public hearings.

24 Mr. Keyt, before I read the rules I'm going

1 to ask you to identify the application and project
2 overview.

3 MR. KEYT: Okay. The application is one
4 on file by Mural Energy, LLC. They have filed an
5 application to construct and operate a commercial
6 solar energy facility consisting of approximately 180
7 megawatts, 1,433 acres located on private agricultural
8 land in Vermilion County, Illinois. I think as the
9 applicant starts going through their evidence they'll
10 present a more comprehensive map of the facility.

11 MR. KAINS: Very good. Thank you. Now,
12 Mr. Keyt, one other thing. Can you confirm for me
13 that the applicant has paid all necessary fees and
14 that the notice of public hearing has been published
15 and mailed in accordance with laws?

16 MR. KEYT: Yes, I can confirm that the
17 applicable fees have been paid to the county to allow
18 for the conduction of the hearing and the applicant
19 has submitted copies of their certified mail receipts
20 and an affidavit indicating the publication in the
21 newspaper and also the mailings required by the
22 statute.

23 MR. KAINS: Very good. Thank you,
24 Mr. Keyt.

1 Now the rules. All witnesses including those
2 of the applicant and any other interested party
3 wishing to address the Wind and Solar Committee shall
4 be sworn. All witnesses shall testify under oath.

5 Mr. Keyt, do we have any sign in sheets for
6 witnesses?

7 MR. KEYT: We did not do sign in sheets.

8 MR. KAINS: Okay. Very good. So what
9 I'll do when it's time for witnesses in support of or
10 in opposition to or neutral on the application I will
11 just look for a show of hands, folks, who are willing
12 to testify. All right, very good.

13 The applicant shall present testimony and
14 evidence. Each of the applicant's witnesses shall
15 remain present for questioning by the Wind and Solar
16 Committee and other interested parties until such time
17 as the witness is excused by the hearing facilitator.

18 Members of the Wind and Solar Committee shall
19 have the opportunity to question the applicant's
20 witnesses providing testimony. Wind and Solar
21 Committee members may in my discretion may ask
22 questions at any time during the hearing. Other
23 interested parties shall have the opportunity to
24 question the applicant's witnesses and evidence.

1 Interested parties wishing to address the Wind and
2 Solar Committee shall identify themselves by name and
3 address on the record at the hearing. Interested
4 parties shall be invited to address the Wind and Solar
5 Committee in the following order:

6 First: Members of units of local government,
7 including the Vermilion County Board and school
8 districts, interested parties represented by licensed
9 attorneys, other interested parties, that would be
10 members of the public, and counsel for Vermilion
11 County and consultants. Once the applicant concludes
12 its case persons in favor of the application can
13 testify. Questioning of these witnesses shall occur
14 in the order specified above. Once all in favor of
15 the application of testifying, those opposed shall
16 testify beginning with witnesses called by counsel.
17 Questioning of these witnesses shall occur in the
18 order specified above. Once all opposed to the
19 application have testified, those who are neutral on
20 the application shall testify. Questioning of these
21 witnesses shall occur in the order specified above.
22 Then there will be presentation of any counsel for
23 Vermilion County reports or comments, that will be
24 followed by the rebuttal evidence, if any, from the

1 applicant. Then we will have closing statement by the
2 applicant. Applicant shall not introduce new
3 information in the closing statement. Then public
4 comment related to this project by interested parties,
5 three minutes per person. Note that public comment is
6 not testimony or evidence to be considered by the
7 committee. Then there will be the acceptance of
8 written comments, if any, by the Wind and Solar
9 Committee. Any written comments that are submitted
10 will be copied and provided to each committee member
11 and would now be part of the record. Then there will
12 be any rebuttal closing statement by the applicant.
13 Then the Wind and Solar Committee shall close the
14 evidence. Following that the Wind and Solar Committee
15 shall deliberate and vote on the application. The
16 Wind and Solar Committee may in its discretion set a
17 future hearing date for deliberations and voting on
18 the application. Then we will have public comment
19 unrelated to the project. And, finally, we will note
20 that the vote of the Wind and Solar Committee is not a
21 final decision but is a recommendation to the
22 Vermilion County Board. The Wind and Solar Committee
23 shall transmit its findings and recommendations to the
24 County Board.

1 Now, briefly procedures governing this public
2 hearing. The Vermilion County Wind and Solar
3 Committee will receive evidence regarding the
4 application during the public hearing. Evidence may
5 be presented in two forms: First, oral testimony
6 which may also include documentary evidence presented
7 at the public hearing. For persons who are deemed by
8 me to be expert witnesses there will be no time limit
9 on the presentation of their testimony. For nonexpert
10 witnesses, lay people who do not have the expertise in
11 engineering, project management, the construction of
12 solar farms, nonexperts such as those or who are
13 Vermilion County residents will have 30 minutes to
14 present their testimony. Nonexpert witnesses who are
15 not Vermilion County residents shall have 15 minutes
16 to say whatever they want to say in their testimony.
17 These time limits do not include the time to answer
18 questions from the committee or the public. Written
19 comments are noted forms of testimony that can be
20 presented. They do have to be -- either be submitted
21 prior to the hearing or during the course of the
22 hearing. Once we conclude the hearing written
23 comments will not be accepted.

24 All right. Couple of notes. Speakers may

1 not grant time to other speakers. If you use five
2 minutes and you have ten minutes remaining you can't
3 give it to somebody else. Testimony is limited to one
4 time per person unless that witness is recalled by
5 counsel or at the request of the Wind and Solar
6 Committee.

7 A final note or reminder on this subject
8 about just conduct of the hearing. Audience members
9 must be seated and quiet. Lawyering in the hearing
10 room is prohibited. Any person who is unruly and
11 disrupts or attempts to disrupt the hearing or
12 otherwise engages in inappropriate behavior will be
13 expelled. Excessive applause, cheering or other
14 commotion shall be considered disruptive. This is a
15 public meeting. It's not a movie where everybody
16 jumps up and down and cheers when somebody says
17 something you like or boos when they say something you
18 don't like. We'll just keep it -- keep it at that.

19 Finally, we have 11 guidelines for the siting
20 of wind and solar energy systems.

21 First: These rules are supplementary to the
22 provisions of the Vermilion County ordinances
23 governing commercial wind and solar energy facilities.

24 Two: These provisions shall govern

1 procedures of the public hearings before the Vermilion
2 County Wind and Solar Committee concerning commercial
3 wind and solar energy facilities. The chairperson of
4 the Wind and Solar Committee may modify these
5 procedures in their reasonable discretion.

6 A court reporter shall be present at every
7 hearing unless no court reporter is available to
8 provide a transcript of the proceedings. Jamie is
9 seated right down to my right. She would be there to
10 the left. She takes down every single thing that is
11 said while we're on the record in this hearing. So I
12 would ask that people speak up or come in close to the
13 microphone because it is vitally important that Jamie
14 is able to take down everything that is said.

15 Transcripts will be prepared by the court
16 reporter and sent to the Wind and Solar Committee
17 representatives. Costs of all transcripts of hearings
18 and meetings before the Wind and Solar Committee shall
19 be borne by the applicant and costs of the transcripts
20 shall be paid directly to the court reporting service.

21 Number four: The hearing shall occur on the
22 date and time set forth in the published notice. All
23 necessary additional hearing dates shall be scheduled
24 at the discretion of the Wind and Solar Committee.

1 Five: The chair or acting chair of the Wind
2 and Solar Committee shall preside at the public
3 hearings of the Wind and Solar Committee. The chair
4 shall have the authority to control the hearing
5 proceedings and may set time limits and schedule the
6 appearance of witnesses and require their appearance
7 on dates set forth in the scheduling order. They may
8 restrict witnesses from testifying for failure to
9 appear on the dates scheduled for that witness's
10 testimony, adopt reasonable time limits upon the
11 questioning of witnesses by the applicant and
12 interested parties and take other action deemed
13 reasonably necessary by the chair in order to conduct
14 the hearing in an orderly, efficient and professional
15 manner. And Mr. Fourez has delegated much of that
16 authority to me, but as the chair of this committee he
17 still has the final say on what types of testimony and
18 witnesses are allowed.

19 Number six: The hearing before this
20 committee shall not be governed by and the Wind and
21 Solar Committee shall not be bound by the strict rules
22 of evidence. The Wind and Solar Committee may exclude
23 irrelevant material and unduly repetitious testimony
24 and any other testimony or evidence that in the

1 discretion of the chair or me is not pertinent to the
2 proceedings. At the discretion of the chair members
3 of this committee shall be permitted to question
4 witnesses at any time during the hearing and Wind and
5 Solar Committee members may request that additional
6 information or evidence be presented to them during
7 the hearing.

8 Number eight: Public hearings may be held by
9 less than a quarrel of the Wind and Solar Committee.

10 I apologize for my throat.

11 Guideline number nine: The discretion to
12 admit documents into evidence lies solely with me the
13 hearing facilitator.

14 Number ten: Documents and recordings
15 obtained or printed from the internet or elsewhere
16 will be admissible at the discretion of the hearing
17 facilitator who may ask the witness to lay a
18 foundation for the document or recordings based upon
19 that individual's personal knowledge. And the Wind
20 and Solar Committee or hearing facilitator -- gosh,
21 I'm sorry. Just started over the weekend. Isn't that
22 great. The Wind and Solar Committee or hearing
23 facilitator will determine if a person qualifies as an
24 expert witness and will state its finding on the

1 record. Expert witnesses shall identify their area of
2 expertise and limit their testimony thereto. Experts
3 shall clearly identify and provide any study they've
4 completed on the subject matter at the hearing. An
5 expert may rely on studies not in the record used to
6 form their opinion but shall not testify about the
7 results of those studies except on cross-examination
8 or upon a meeting from the Wind and Solar Committee
9 chair or hearing facilitator. All studies relied upon
10 in an expert's written submission must be disclosed.
11 Written credentials shall be provided for expert
12 witnesses.

13 It is time now for the opening statement from
14 the applicant. Ms. Courtney Kennedy is the attorney
15 for of the applicant.

16 It's my understanding, Ms. Kennedy, you
17 practice law in Dixon, Illinois.

18 MS. KENNEDY: That is correct.

19 MR. KAINS: All right. Ms. Kennedy, you
20 have the floor with your opening statement. You may
21 proceed.

22 MS. KENNEDY: Thank you. As noted, my
23 name is Courtney Kennedy. I am here as the local
24 counsel for the petitioner Mural Energy, LLC.

1 First and foremost I'd like to thank everyone
2 for being here today. I think it's a very important
3 contest and I, you know, welcome any input from the
4 public and we certainly appreciate the committee
5 taking the time to hear this petition.

6 At a 50,000 feet view Mural Energy filed a
7 petition for a siting permit on September 18th, 2023,
8 for the construction and operation of a 180 megawatt
9 solar farm situated here -- proposed to be situated
10 here in Vermilion County. This project as proposed
11 spans 1,443 acres and involves 28 participating
12 landowners.

13 Throughout the course of this hearing you
14 will hear testimony from various company
15 representatives concerning what the project looks like
16 and how it complies with the Vermilion County
17 Ordinance regulating commercial solar energy
18 facilities. You will also hear from a wide array of
19 subject matter experts regarding various studies and
20 reports performed on behalf of the project.

21 At the conclusion of their testimony and
22 after reviewing all the evidence presented before you
23 it is my hope that you will agree that this project
24 complies with the Vermilion County Ordinance

1 regulating commercial solar energy facilities.

2 Also at the conclusion of this hearing we
3 respectfully request that this Wind and Solar
4 Committee recommend this project to the Vermilion
5 County Board.

6 Without further adieu, I'd like to call our
7 witness first.

8 MR. KAINS: Yes, you may.

9 MS. KENNEDY: I would like to call
10 Rupert Crighton.

11 MR. KAINS: Come forward to the podium,
12 sir. Sir, could you please raise your right hand to
13 be sworn.

14 R U P E R T C R I G H T O N,
15 was called as a witness on behalf of the Petitioner
16 and, having been first duly sworn, testified as
17 follows:

18 MR. KAINS: Thank you. You may proceed.

19 **DIRECT EXAMINATION,**

20 **QUESTIONS BY MS. COURTNEY KENNEDY:**

21 Q. Could you please state your name and
22 spell it for the record.

23 A. Yeah, my name is Rupert Crighton, it's
24 R-U-P-E-R-T, C-R-I-G-H-T-O-N.

1 Q. Tell us a little bit about your
2 educational background.

3 A. I was educated at McGill University in
4 Montreal, Canada. I have a degree in Mechanical
5 Engineering and I have a license to practice
6 engineering with the Professional Engineers of
7 Ontario.

8 Q. What is your current occupation?

9 A. I'm a Director of Project Development
10 with Algonquin Power.

11 COURT REPORTER: With what?

12 THE WITNESS: Algonquin Power.

13 COURT REPORTER: Can you spell that.

14 THE WITNESS: We can call it Liberty
15 Power as well if you want to do that.

16 MR. KEYT: Can you spell Algonquin for
17 the record.

18 THE WITNESS: I can, yeah.

19 A-L-G-O-N-Q-U-I-N.

20 **QUESTIONS BY MS. KENNEDY:**

21 Q. And how long have you held that job
22 title?

23 A. It will be ten years in May 2024, so I
24 guess nine.

1 Q. And so Algonquin Power, it does business
2 as Liberty Power?

3 A. Yes.

4 Q. And so throughout the course of this
5 hearing you may use the words Liberty Power and
6 Algonquin interchangeably; is that correct?

7 A. Yeah, they do get interchanged, but we
8 are Algonquin Power and Utilities.

9 Q. So tell us a little bit about what sort
10 of business Algonquin Power is engaged in.

11 A. So Algonquin Power has a business
12 development arm which is where I'm working developing
13 new projects, wind and solar and battery storage now
14 as well primarily, and then we also have a utility
15 side of the business which distributes water and gas
16 and electricity to -- I think we're up to about a
17 million connected customers across the U.S.

18 Q. What is Mural Energy, LLC?

19 A. Mural Energy, LLC is the entity which
20 will own this solar project that we're here today to
21 discuss.

22 Q. And is that fully owned by Algonquin
23 Power?

24 A. It is.

1 Q. And is it an Illinois limited liability
2 company?

3 A. Yes.

4 Q. And Mural Energy is the applicant in
5 this pending zoning hearing; is that correct?

6 A. Correct.

7 Q. And I'm going to refer to this instead
8 of Mural Energy, LLC, I'm going to call it Mural
9 Energy, fair enough?

10 A. Yeah, of course, that is, you know,
11 considered Mural.

12 Q. Mural Energy submitted an application
13 for a commercial solar energy facility here in
14 Vermilion County?

15 A. Yes.

16 Q. What is your relationship, if any, to
17 Mural Energy, LLC?

18 A. As the project director I help the
19 project development team which consists of a project
20 manager, a project coordinator, schedulers, internal
21 engineering, an array of other side consultants, and I
22 help guide the -- the directive activities.

23 Q. So is it a fair statement that you serve
24 as a developer of this project?

1 A. Yes.

2 Q. How large is this proposed project?

3 A. This is 180 megawatts.

4 Q. Is this proposed to be situated on 1,443
5 acres?

6 A. That's correct.

7 Q. How many participating parcels are
8 involved on this project?

9 A. That's -- I don't have that off the top
10 of my head, I'm sorry. I apologize. I'm sure you do.

11 Q. And I believe I misspoke in my -- my
12 opening statement, but there is -- I noted that there
13 was 28 participating landowners. Is there 28
14 participating parcels in this project?

15 A. Well, landowners may own multiple
16 parcels.

17 Q. Sure.

18 A. So, but, yeah, 28 landowners. So some
19 other number of parcels and -- and, yeah.

20 Q. You noted that this project spans across
21 1,443 acres, how many acres are actually within the
22 fenced area of this project?

23 A. Just under 1,000. I believe there's
24 990.

1 Q. What, if anything, can you tell me about
2 the characteristics of the participating parcels of
3 this project?

4 A. Primarily agricultural crop.

5 Q. Would that be like row crop production?

6 A. Yes.

7 Q. What, if anything, can you tell me about
8 the neighboring parcels for this project?

9 A. The same. I would say agricultural row
10 crop.

11 Q. On behalf of the applicant Mural Energy,
12 LLC, do you agree to be bound by any and all
13 representations made under oath during your testimony
14 portion of this hearing?

15 A. I do.

16 Q. How many megawatts of renewable energy
17 development have you overseen?

18 A. I've overseen just over 1,000 megawatts
19 in my time with Algonquin Power in the past, you know,
20 nine and a half years, and then the decade prior to
21 that it was about the same, again, with different
22 organizations.

23 Q. How many solar projects have you
24 participated in the development of?

1 A. Ten.

2 Q. And what -- can you give us a range of
3 the various size?

4 A. Yeah. So they -- they have grown over
5 the years. We have Luning which is 50 megawatts.
6 Bakersfield 1 which was 20 megawatts, Bakersfield 2
7 was 10 megawatts. Greatway Solar 1 was 75, Greatway
8 Solar 2 was 45. Altavista was 80, and, yeah, so this
9 is definitely -- you know, 180 is a large scale solar
10 project.

11 Q. Why did you choose this particular --

12 MR. PUZEY: I have a question. Where is
13 Bakersfield? Is that in California?

14 THE WITNESS: That's California, yes.

15 MR. PUZEY: Thank you.

16 **QUESTIONS BY MS. KENNEDY:**

17 Q. Why did you choose this location for
18 this particular project?

19 A. Well, we had -- you know, it's a low
20 population density which is a good fit for solar
21 energy obviously, there's good connectability, there's
22 a strong Ameren transmission line that runs right
23 through the area that we're going to connect to,
24 there's landowner interest. So in the early stage of

1 development when we started to knock on doors and talk
2 to local landowners people would -- they'd be
3 interested, we had strong positive response, and
4 there's a precedence for solar and renewable projects
5 in the area. The State siting bill, the HB4412,
6 obviously when we started the development wasn't
7 through but it was already in discussion. We believe
8 the siting and environmental suitability of the area
9 and the irradiance here, the solar -- the levels of
10 solar energy is acceptable for the economics that we
11 need for the power generation. We're quite -- it's
12 quite straight forward to identify any location, with
13 software you can identify how much solar irradiance
14 you will get through that location, and so we -- we do
15 that in the early stage of development to confirm that
16 there is enough irradiance to make the project viable.

17 Q. And in connection with this project did
18 you prepare a commercial soil energy facility siting
19 permit application?

20 A. Yes.

21 Q. Okay. I'm going to pull this up to you.
22 Obviously I'm holding the first page of a rather
23 extensive document. But are you familiar with this?

24 A. I am, yes.

1 Q. And I'm going to refer to this as the
2 application binder, if you will. Did you assist in
3 the preparation of this application binder?

4 A. I did.

5 Q. And did the company send copies of this
6 application binder to the Vermilion County
7 representatives?

8 A. We did. We sent ten hard copies and ten
9 thumb drives.

10 Q. And those hard copies, were they
11 compiled into three-ring binders that are white in
12 color?

13 A. Yes.

14 MS. KENNEDY: I would like to mark that
15 as Exhibit 1, if I may.

16 MR. KAINS: The application -- Mr. Keyt,
17 if you could -- Mr. Keyt, if you could mark the
18 application as Applicant's Exhibit 1.

19 MR. KEYT: So marked.

20 MR. KAINS: Thank you.

21 MS. KENNEDY: Thank you.

22 **QUESTIONS BY MS. KENNEDY:**

23 Q. Jumping back to the project details,
24 Mr. Crighton, how many panels are anticipated for this

1 project?

2 A. The application that we submitted will
3 show 422,000 panels, roughly. However, the industry
4 is -- it's quite an active development. We see the
5 panels getting bigger every year. We'll likely build
6 this project with 300,000 panels would be my
7 expectation.

8 Q. And what types of panels are these?

9 A. These are monocrystalline bifacial
10 panels. So what they do -- the bifacial means that
11 some of the light that hits the front side of the
12 panel actually travels right through the panel,
13 reflects off the ground below it and comes back and
14 hits the back side of the panel which adds another bit
15 of energy to the gather, so that's -- that's the
16 bifacial. You just --

17 Q. Is it possible for these panels to break
18 and cause any leaching issues into the ground?

19 A. They can break. Breakage is -- is
20 unlikely, but, of course, when we're -- when we're
21 handling, you know, that kind of number of panels
22 there could be some breakage. When they do break they
23 kind of crunch up, it's mostly glass and inside is a
24 solid silicone wafer, they can be gathered up and

1 disposed of, and that's -- you know, during
2 construction we will likely have some breakage.
3 During operation it's unlikely but it's possible.

4 Q. Can these panels proposed withstand
5 harsh weather conditions like tornados?

6 A. Yes. These panels will be on racks
7 which tilt to follow the sun as it goes from east to
8 west, and in an event the high wind speed, they'll go
9 to flat, a still mode that helps protect them from
10 extreme temperatures.

11 MR. GREENWELL: Did you speak to the
12 leaching? I don't think you mentioned her question --
13 her question on leaching.

14 THE WITNESS: Yeah, to the best of my
15 knowledge, I have no -- I -- I can't see how any
16 leaching occurs. We have some later witnesses who
17 will be able to speak to that, but it's a -- it's a
18 dry -- it's kind of like if you drop your cell phone
19 and it bounced off a rock and fell in the mud, like
20 there's no -- there's no goop or fluids that -- that
21 come out from this. And on the time scale, you know,
22 you can imagine if we had a broken panel, they get
23 cleaned up that day or within hours of the event
24 happening. It would take, you know, in the order of

1 years or decades for any significant leaching, I would
2 say.

3 MR. ELMORE: Is there any -- sorry. Are
4 you finished?

5 MR. GREENWELL: Yeah, I'm finished.

6 MR. ELMORE: Is there any -- in that
7 disposal of that broken panel is there any sort of
8 specific or special means that has to be disposed of?

9 THE WITNESS: I do not believe so, no.
10 There's a State by State thing, though.

11 MR. ELMORE: Sure.

12 **QUESTIONS BY MS. KENNEDY:**

13 Q. How will these panels be fixed into the
14 ground?

15 A. They'll be fastened to racking which is
16 fastened and turned into piles which are driven into
17 the ground. The piles will be around four to six feet
18 above ground and about the same below, but that's
19 subject to final engineering details which hasn't been
20 done cause I -- I'm speaking to these numbers based on
21 experience and other similar terrain. We do have our
22 engineering consultant here that can answer in more
23 detail.

24 Q. What is the maximum type panel at full

1 tilt?

2 A. About ten feet. So, like I said, if
3 the -- if the top of the pile head is at about six
4 feet, four to six feet, when the panel is -- first
5 thing in the morning or last thing in the evening when
6 it's near vertical that will be when it's at that, you
7 know, approximately ten feet.

8 Q. What is the useful life of a panel?

9 A. 25 years is what the panel
10 manufacturer's are advising we can expect from these
11 panels. The panels do degrade with time so it's
12 likely that that 20, 25 year time period we may
13 repower some of them, replace some of them.

14 Q. And what do you do with a panel once
15 it's reached its useful life?

16 A. They get recycled. We have a project in
17 Maryland which our operation's manager who is here
18 will speak to. They've -- they've had panels which
19 were damaged and they sent off for recycling. So
20 while there's a new industry, the solar panel
21 recycling industry is growing. We fully expect that
22 we would -- it also fits with our values, corporate
23 values.

24 Q. Will this project be surrounded by a

1 fence?

2 A. Yes.

3 Q. What type of fence?

4 A. In our application we've submitted a
5 chain link fence, I believe it's seven foot six inches
6 with barbed wire above, that's the sort of industry
7 standard across the country, but we are open to
8 working with the county if they would like some
9 alternatives.

10 We're building a project called Clearview in
11 Ohio which uses a different style of fencing. So we
12 can -- but for the application we put in the industry
13 standards.

14 Q. Is there barbed wire proposed at the top
15 of the fence?

16 A. There is, three strands.

17 Q. Will any gates situated on the fence be
18 left?

19 A. There will be gates, of course, to
20 access and they will be locked, absolutely.

21 Q. Based on your experience on other
22 projects that you've developed will the fence, you
23 know, where you've seen fencing of similar types, do
24 they have any adverse effect on wild life or

1 wildlife --

2 A. No.

3 Q. -- movement?

4 A. Not that I have seen, no. And -- it's
5 the same standard chain link fence as you see in --
6 you know, everywhere, so there's -- there's no reason
7 it would be different.

8 Q. Will the fence contain any signage?

9 A. We will have signage on the fence. Each
10 of the gates will have signage which identifies the
11 area of the -- of the solar array. There will also be
12 signage at the main entrance with a contact number and
13 the name of the project and the facility number.

14 Q. Tell me about the lighting that's
15 proposed for this project.

16 A. The substation will have lighting on it
17 downcast, as minimal as possible, but it likely will
18 be on a motion sensor detector, but that is subject to
19 Ameren rules at the time, but it would be the only
20 lighting that we would absolutely be required to have.
21 There could also be -- you know, when we do the
22 maintenance for these sites because the solar array is
23 lighted we prefer to do the maintenance at night so
24 we're not losing on -- on generation, so there could

1 be a -- you know, infrequent lighting put up while the
2 operation people make repairs if necessary, but I --

3 Q. What is an inverter?

4 A. The inverter is a machine that takes the
5 DC current which is created by the solar panels and
6 inverts it, you know, revises it into AC power which
7 we can use and sell into the grid and which is what
8 you have in your outlets and, of course, all our
9 electrical works on it.

10 Q. How many inverters are proposed for this
11 project?

12 A. The application we submitted has 59
13 inverters, but similar to the panels, the size of
14 these inverters is also not physically getting bigger
15 but their power capacity is increasing. So I would
16 expect lots should be more like 44, 43 just with
17 the -- the inverters that are available now.

18 Q. There are site plans that are included
19 in the appendix in this application binder; is that
20 correct?

21 A. Yes.

22 Q. And so the technical aspects of the
23 project like the inverters, the fence, those are
24 depicted on those site plans; is that correct?

1 A. They're all included, correct.

2 Q. Are you proposing to utilizing battery
3 energy storage with this project?

4 A. There is no battery energy storage
5 proposed.

6 Q. Will there be wires or cables between
7 solar panels?

8 A. Yes. Yes. The solar panels string
9 wire, as call it, connects all the panels together and
10 gathers them in the DC string wire.

11 Q. And will those be buried underground
12 between the panels?

13 A. No. Between panels, from panel to panel
14 they're suspended below the panels and then they go
15 underground to go off to the inverter. So they're
16 underground from the string to the inverter
17 underground.

18 Q. Tell me about construction for this
19 project. How long is it proposed to take?

20 A. It will be -- one -- primarily one main
21 season, meaning we localize in the spring, so March
22 probably, hopefully, you know, weather depending, and
23 work through the summer and complete in the fall,
24 right around probably this time of year actually,

1 early winter, December would be the intent.

2 Q. When is construction for this project
3 anticipated to begin?

4 A. 2026. There might be some, you know,
5 small, preliminary that happens in the fall of the
6 year prior. We might, you know, ask our landowners to
7 plant a sturdy rye grass or similar to help hold the
8 ground together for the construction that fall and
9 spring, maybe some other minor drainage issues that
10 we'll take of the year before.

11 Q. How many construction jobs will this
12 project generate?

13 A. During the -- you know, it's -- it
14 climbs and then peaks and drops off, but 100 to 150 is
15 probably about how many you would see here.

16 Q. Will traffic in the area increase during
17 this construction process?

18 A. Yes.

19 Q. And what type of vehicles can we expect
20 to see during construction?

21 A. Well, we'll see numerous pickup trucks
22 for the workers or automobiles, depends how they
23 choose to get around. There will be a number of
24 flatbeds which will deliver heavy equipment, the

1 piledrivers that will deliver the inverters coming in
2 on flatbeds, probably, you know, three to a flatbed,
3 and then the panels typically are delivered in van
4 trucks, so we'll see a combination of all of those.
5 There will be some -- the land here is pretty flat,
6 but there will be some bulldozer and earth grading
7 equipment, there will also be graders for building the
8 roads. There will be compaction equipment, rollers
9 for building the roads. I must be -- we have live
10 belly trucks for distributing the aggregate.

11 Q. And you noted that traffic was to
12 increase during this construction process, will this
13 be a permanent increase or will this be a temporary
14 increase?

15 A. No, this is just for the construction.
16 We have to get all the panels here and all the other
17 equipment, the racking and the piles, the inverters,
18 they all have to be delivered. Once that's done and
19 that will happen in the beginning of the construction
20 season, the materials, that's one of the first things
21 that happens is, you know, the materials start getting
22 delivered, the main deliveries will probably happen
23 during, you know, July and August and then will taper
24 off, but once construction's over the deliveries would

1 be done with like in --

2 MR. ELMORE: Excuse me, I have a
3 question.

4 THE WITNESS: Yeah.

5 MR. ELMORE: The construction workers,
6 will they be hired from out of the area, from the
7 area, what --

8 THE WITNESS: Well, yeah, they will be
9 union workers primarily, and so we would hire locally
10 to the extent of -- you know, the limits of
11 availability. And we believe that there is quite a
12 strong local workforce that will be available.

13 MR. ELMORE: Thank you.

14 THE WITNESS: I mean, it's also an
15 opportunity -- if I could expand on that question a
16 little bit, you know, there will be new -- during
17 these construction jobs someone in the local union
18 worker might get on with the contractor building the
19 project and then when the project's done that
20 contractor goes off to another solar project, they
21 might come with. And in my years before I was with
22 Algonquin I was with a large general contractor, that
23 was quite common where we would -- we would pick up
24 people at the local project and they would travel with

1 us for years to follow. So it's a -- it's actually an
2 opportunity to get into a vibrant growing industry.

3 MR. ELMORE: Thank you.

4 MR. PUZEY: I have a question regarding
5 the number of deliveries.

6 THE WITNESS: Yeah.

7 MR. PUZEY: It's my understanding it
8 will be some 17,000 deliveries going up and down the
9 road. At some point in time have you contacted the
10 local highway commissioner for the township?

11 THE WITNESS: We haven't started
12 engaging yet with the road township. I think we've
13 had some initial contact with them just to let them
14 know this is happening. We've proposed in the
15 application a haul group plan, but it's, you know, our
16 initial how about this, kind of our initial proposal.
17 We will work closely with the road superintendant and
18 the county road commissioners to identify and optimize
19 the road, like the haul routes. It's in our best
20 interests as well to have clearly delineated roads
21 that we're going to use, we can lay that out, we'll
22 include that in the contract with the general
23 contractor and he'll have a map that says, you know,
24 deliver on this road or this one, however we devise.

1 MR. PUZEY: Do you plan to change the
2 configuration of the road or the coding? For example,
3 that one road is a gravel road and winds would be out
4 of the west and be coming right at my house.

5 THE WITNESS: No. Well, dust mitigation
6 is a serious part of these projects absolutely and
7 they'll -- the contractor will have to have a plan for
8 dust mitigation on the roads, you know, typically
9 water, but possibly calcium chloride or other
10 solutions as whatever works best in the local -- local
11 terrain.

12 MR. PUZEY: Okay.

13 THE WITNESS: Yeah, there's no other way
14 to get the materials to site unfortunately.

15 MR. PUZEY: Understood. Thank you.

16 MR. FOUREZ: Back to your talking about
17 the workforce, do you plan on paying prevailing wage
18 or how does that --

19 THE WITNESS: Well, absolutely. It will
20 be -- this will be a union project and so the unions
21 are subject to prevailing rates.

22 MR. FOUREZ: Okay.

23 THE WITNESS: And, in fact, there's so
24 much solar developments happening right now that I

1 think the wages are increasing, you know, as we speak.

2 **QUESTIONS BY MS. KENNEDY:**

3 Q. At the time that you apply for the
4 building permits do you commit to contacting the
5 appropriate highway commissioners to approve the
6 construction routes?

7 A. Absolutely, yeah. We would be --
8 intend -- fully intend and expect to work with them
9 cooperatively and come up with a, as I said, an
10 optimized plan.

11 Q. And I believe you touched on this, but
12 just from my understanding you mentioned that there
13 was a haul route and that was provided in the
14 application binder?

15 A. Yes.

16 Q. And does that show the preliminary
17 construction routes for this project?

18 A. It does.

19 Q. On behalf of the applicant do you commit
20 to fixing and repairing any damage to roads --

21 A. Absolutely.

22 Q. -- that are caused the during
23 construction process?

24 A. Yes, absolutely.

1 Q. And do you commit to working with local
2 township officials during this process as well?

3 A. Yes.

4 Q. Will you create any new access roads to
5 the project?

6 A. We will internal to the PV plant. All
7 those 59 inverters or, as I said, most likely be 44,
8 42 will be accessible by road within the PV site.

9 Q. Will you utilize a laydown for
10 construction?

11 A. We will adjacent to the substation.

12 Q. And you mentioned at peak there could be
13 100 to 150 construction workers?

14 A. Yes.

15 Q. Where will all these individuals park?

16 A. They will park at the laydown area and
17 there will also be provisional satellite laydown
18 areas, if you will, within the PV array.

19 Q. Will there be any noise associated
20 during the construction phase during this project?

21 A. Unfortunately yes.

22 Q. What can we expect?

23 A. Well, the loudest -- the loudest
24 operation that will occur is the pile driving. So

1 there's quite a few piles to drive. There are -- you
2 know, the steel is -- the final -- subject to final
3 engineering, but we're looking at like four or five
4 inch pipes which get driven into the ground and the
5 equipment that does that is -- while it will have
6 whatever acoustic mitigation equipment is available,
7 it does create some noise.

8 Q. And this pile drive that we -- I mean,
9 excuse me, will this be temporary or a permanent
10 noise?

11 A. Well, temporary, yeah, absolutely. And,
12 in fact, they move quite quick. There will be a
13 number of pile driver machines and they will sweep
14 across the site from one side of the site to the
15 other. So the public will -- will generally have an
16 idea of where to expect us next week cause you'll --
17 you'll see how we're moving.

18 Q. Is there any outdoor storage associated
19 with this project?

20 A. Minimal. There will be an O & M
21 building and most of our materials will be kept inside
22 that building, but there may be some materials and
23 parking for the maintenance people outdoors.

24 Q. And is that operation and maintenance

1 building shown on the site plans for this project?

2 A. It is. When you're asking about outdoor
3 storage, also during construction, of course, all the
4 panels will be stored outdoors, all the piles, all the
5 equipment will be stored on pallets outdoors and laid
6 on the ground.

7 Q. Are you familiar with the factors set
8 out by the Vermilion County Ordinance when considering
9 the application for commercial solar energy
10 facilities?

11 A. Yes.

12 Q. And have you reviewed that prior to
13 today's hearing?

14 A. I have.

15 Q. In your opinion based on your experience
16 will the siting of this project take the land out of
17 agricultural use?

18 A. No. I mean, the land where we're
19 actually building the panels on will come out of
20 agricultural use for the time period of operation but
21 we fully expect that when we decommission the facility
22 all those panels, racks, cables, wires, inverters,
23 piles come out, all the roads come out, subject to
24 landowner preference, and the land will go back into

1 fertile agricultural actively.

2 Q. And based on your experience with the
3 projects that you've developed do you believe that
4 this particular project will promote the public's
5 general health, safety, morals and general welfare?

6 A. I do.

7 Q. And how so?

8 A. You know, there's -- among the general
9 population there's a fair amount of anxiety about
10 global warming and the energy transition and I believe
11 that these projects when the people of the community
12 actually see them operating it will be a source of
13 hope and pride for the local community that there's a
14 solution, there are solutions, here's an example of
15 one.

16 Q. Will the siting of this project generate
17 revenue for the participating landowners?

18 A. It will.

19 Q. And will that be in the form of lease
20 payments?

21 A. That's correct.

22 Q. What type of ancillary benefits will the
23 local economy, what will this area receive?

24 A. Well, during the construction phase, of

1 course, the -- the construction workers will likely
2 live locally, depending on how far they choose to
3 commute to the site, so there will be accommodations,
4 food and entertainment expense by the workers, and
5 then, you know, we order the materials, they come from
6 main warehousing places, but those will pop up locally
7 possibly too. And then during the operational period
8 the -- the three or four full-time employees who live
9 here will likely live in the community or, you know,
10 within driving distance of the -- of the -- of the
11 site.

12 Q. Will this project generate any property
13 taxes to the county?

14 A. It will. Our -- and I'm not a property
15 tax expert, of course, but our calculation is about
16 1.4 million dollars annually to the county.

17 Q. What, if any, community outreach or
18 engagement has been performed for on behalf of this
19 project?

20 A. We've done a number of different
21 outreach events. We've had, you know, our in-house
22 engagement team from Calvert Street who are here today
23 as well have done numerous outreach activities
24 throughout the duration of the development. We've had

1 school district engagement. We had an open house at
2 the Salt Fork School. Last -- I want to say that
3 was -- we basically had that, so we've had some open
4 houses. We've had -- yeah, numerous outreaches.

5 Q. Have you had any engagement with the
6 local fire protection district?

7 A. We have.

8 Q. And will you offer training to those
9 local fire protection districts during construction
10 and operations to finish this project?

11 A. Yes. That's standard procedure towards
12 the end of the construction period as we're, you know,
13 transitioning into commissioning phase that's when
14 the -- our operation management will take over and
15 they will have outreached with the local emergency
16 services organizations and likely invite them to visit
17 the site where they get a detailed tour of the
18 facility and so they have an idea of and a
19 presentation of the emergency program safety response.

20 Q. And what, if any, outreach have you had
21 with the Village of Fairmount concerning this project?

22 A. The Village of Fairmount, so we actually
23 have a -- numerous outreach with Fairmount. They were
24 quite supportive of the project and we have a

1 community benefits agreement with Fairmount. The --
2 their 1.5 mile -- what did we call it, jurisdiction
3 overlaps with some of the solar parcels that --

4 MR. KEYT: Hold on. Let me pause you
5 for a second. What are you handing out?

6 MS. KENNEDY: Sorry. That was at my
7 direction.

8 MR. KEYT: That's okay.

9 MS. KENNEDY: You've testified to a
10 community benefit agreement, I'm passing that out to
11 the board members as an exhibit.

12 MR. KEYT: Okay. That's fine. I just
13 need a copy so we can get it marked.

14 MR. KAINS: Mr. Keyt, what is this
15 exhibit?

16 MR. KEYT: I'll let the applicant
17 identify what it is.

18 MR. KAINS: Ms. Kennedy, what is -- what
19 is being passed out?

20 MS. KENNEDY: That is a Village of
21 Fairmount resolution concerning the community benefit
22 agreement for the project Mr. Crighton testified to.

23 MR. KAINS: Are you wishing that it be
24 marked as Applicant's Exhibit 2?

1 MS. KENNEDY: Yes.

2 MR. KAINS: Okay. Mr. Keyt, would you
3 mark it as such.

4 MR. KEYT: It is so marked.

5 MR. KAINS: All right. Ms. Kennedy, you
6 may proceed.

7 **QUESTIONS BY MS. KENNEDY:**

8 Q. Go ahead, Mr. Crighton, you can finish
9 your answer, if you will.

10 A. We -- well, because our solar facility
11 overlapped with our mile and a half area of boundary
12 area we engaged with them and over discussions offered
13 the CBA and they agreed.

14 Q. And so ultimately as you entered into
15 the community benefit agreement with the Village of
16 Fairmount the Village passed a resolution supporting
17 the project?

18 A. Correct.

19 MR. KAINS: Mr. Puzey, go ahead.

20 MR. PUZEY: Could you provide additional
21 information on that. It's my understanding that even
22 though they do have a one and a half mile limit you're
23 not building a -- the project within that area?

24 THE WITNESS: It turns out no. The

1 actual final layout we do not overlap that mile and a
2 half, but the parcels that we leased do and so all the
3 parcels that we have leased could potentially have
4 panels built on them, and so we reached out to
5 Fairmount in that stage and then our final design
6 winds up not actually having panels within the mile
7 and a half, but it seems only fair to --

8 MR. PUZEY: But you're saying even
9 though you're not going to --

10 THE WITNESS: -- absolutely.

11 MR. PUZEY: -- on that property?

12 THE WITNESS: Absolutely, yeah.

13 MR. PUZEY: Okay. Thank you.

14 THE WITNESS: It would have been
15 disingenuous we think otherwise to.

16 MR. PUZEY: Good word.

17 **QUESTIONS BY MS. KENNEDY:**

18 Q. Mr. Crighton, are you familiar with
19 what's known as the agricultural impact mitigation
20 agreement or what's referred as the AIMA?

21 A. I am.

22 Q. And is that the agreement with the
23 Illinois Department of Agriculture that sets forth
24 various conditions required of a solar project in

1 Illinois?

2 A. Yes.

3 Q. Have you executed an AIMA with the
4 Department of Agriculture concerning this project?

5 A. Yeah.

6 Q. And is that depicted in Appendix E in
7 the application binder?

8 A. Yes.

9 Q. Do you commit to being bound by the
10 terms and conditions of that AIMA agreement?

11 A. I do.

12 Q. Have you submitted a decommissioning
13 plan for this project?

14 A. Yes.

15 Q. Is that found in Appendix I in the
16 application binder?

17 A. Yes.

18 Q. Tell me what the decommissioning of this
19 project looks like.

20 A. The way I see it -- so this is -- the
21 leases are 35 years so, you know, 25 -- in 2060 as we
22 approach that decommissioning time period it's hard to
23 say what the price of agricultural goods or energy
24 will be at, but as we get -- approach that

1 decommissioning time we will go back to our landowner
2 partners and open a discussion with them about would
3 they like to repower the site and carry on with the
4 solar energy. There will be new technology then I
5 fully expect and we'll have a new economic model,
6 maybe a new lease rate, but at that point the lease is
7 up and so any landowner does not wish to be involved
8 in it anymore or perhaps the economics, food is far
9 more valuable than energy and we -- they want to go
10 back to agriculture, so at that decommissioning time
11 we will use the site roads, remove all the solar
12 panels off of the racking, send those to the recycling
13 facilities and then proceed to remove all the racking
14 and pull up all the piles, remove all the
15 infrastructure basically and then at the end the
16 aggregate from the actual road will be pulled out,
17 that road will have been built on the subgrade.
18 Before we build the road we push the topsoil to the
19 side is the intention and then you're building the
20 road to subgrade. When we go to remove that road that
21 topsoil is still there, it's been -- it's been
22 growing, you know, local grasses and that top soil
23 will be spread back over that -- that road and get
24 graded out and we're left with a farm field as it was,

1 in possibly better condition than we found it.

2 Q. Will any topsoil be removed from the
3 site or sold to another location?

4 A. No.

5 Q. Jumping back to decommissioning, what,
6 if anything, will be done with the underground cables
7 with the project?

8 A. The -- I mean, the commitment on our
9 part is to remove them.

10 Q. And is AIMA required to remove anywhere
11 within five feet of the surface; is that correct?

12 A. Yes.

13 Q. So you commit to adhering to that
14 requirement?

15 A. Absolutely, yeah. And as it were, it's
16 the cost of removal of cable is made up for by the
17 salvage value of the materials and the cable, so
18 there's really no cost -- economic motivation to leave
19 them.

20 Q. And you mentioned earlier that you
21 submitted a decommissioning plan as Appendix I in the
22 application binder, but that AIMA agreement actually
23 requires you to update the cost of decommissioning
24 about every five years; is that correct?

1 A. Yes.

2 Q. And the AIMA governs the financial
3 sureties that the company has proposed for the
4 decommissioning of the project; is that correct?

5 A. Yes.

6 Q. And ultimately the company is
7 responsible for the decommissioning of the project; is
8 that correct?

9 A. That's right.

10 Q. And if the county does not follow
11 through on its promise to decommission the project
12 that the county can draw down on the financial surety
13 required under the AIMA, right, to make sure the
14 project gets decommissioned?

15 A. Yes. That's --

16 Q. Is there any tree clearing anticipated
17 for this project?

18 A. No.

19 Q. Will the project as proposed be built or
20 constructed in any delineated wetland or streams?

21 A. No.

22 Q. If Mural Energy or Liberty Power goes to
23 sell this project later on will the terms and
24 conditions remain, zoning approval from this Wind and

1 Solar Committee or the Vermilion County Board, will
2 those be binding on any successor in interest to the
3 company?

4 A. Absolutely, all those are binding on the
5 Mural Energy, LLC.

6 Q. And so any siting plan that this project
7 receives would be transferred to any successor in
8 interest?

9 A. Absolutely. Well, if I could expand on
10 that point. Our business model was really to own and
11 operate this facility and we own and operate about
12 3,000 megawatts across the country and so we build it
13 so that we have the project to operate.

14 MS. KENNEDY: I have nothing further.

15 MR. KAINS: Very good. Thank you,
16 Ms. Kennedy.

17 Mr. Crighton, we're going to have questions
18 for you from other folks.

19 THE WITNESS: Okay.

20 MR. KAINS: First of all, questions for
21 Mr. Crighton from members of the Wind and Solar
22 Committee.

23 Mr. Fourez.

24 MR. FOUREZ: I've kind of been sitting

1 here accumulating some questions.

2 THE WITNESS: Okay.

3 MR. FOUREZ: You talked about the -- the
4 breakage and those kind of things, is there any idea
5 of what the impact resistance is to these? I'm
6 thinking back, this is going to be there for a
7 generation, and over the years we've had some rather
8 significant hail events in the area. How well will
9 these panels withstand that sort of pounding?

10 THE WITNESS: We've seen them stand up
11 to hail in most instances. I -- I have heard of
12 breakages occurring from hail but not on like a
13 massive scale. The panels were also, as I said,
14 they -- they do tilt, so in the event of extreme
15 weather we can put them in the vertical alignment to
16 reduce the, you know, impact of hail.

17 MR. FOUREZ: Okay. Next question I've
18 got is I've gone through the application books looking
19 at the economic impact of the project and I see a lot
20 of figures based on gross numbers but not net numbers
21 and by that I mean the net difference between what
22 property taxes the project will generate versus what
23 it's already generating as farmland, the net revenue
24 difference between Ag use versus solar development,

1 and most importantly because, again, we're talking
2 about talking land out of productions for generations,
3 what is the economic impact going to be on the Ag
4 supply businesses in the area that provide seed,
5 fertilizer, chemicals and services to those acres?
6 Have you got any idea of what -- what those numbers
7 would be and how that's going to impact the net
8 economic benefit to the community?

9 THE WITNESS: I -- I actually can't in
10 honesty give you like an accurate estimate, but, you
11 know, when you look at this roughly thousand acres and
12 in the county the total acreage of -- of farmland,
13 it's -- it's a small percentage of the total farmland.
14 I -- I would think it would be about commensurate with
15 the percentage that we are of the total. I would have
16 to do some -- we could do some study on that.

17 MR. FOUREZ: I mean, because -- cause it
18 would be more impactful to that -- the local suppliers
19 because their footprint and your footprint --

20 THE WITNESS: Right.

21 MR. FOUREZ: -- overlap to a large
22 extent because most of them don't serve the county as
23 a whole, so it's -- you're talking about two or three
24 townships rather than the whole county as far as how

1 that's going to impact their business down the road.

2 THE WITNESS: Absolutely. I would
3 think, you know, for seed suppliers and fertilizer
4 suppliers there would be a negative impact, and I
5 can't say how else on that.

6 MR. FOUREZ: I guess one other issue
7 I've noticed looking at the maps, a lot of this
8 project in one way or another is close to or bordering
9 the drainage ditch outlet for the district --

10 THE WITNESS: Right, yes.

11 MR. FOUREZ: -- drainage system. What
12 kind of access will the drainage district have to do
13 the maintenance, dredging, clearing obstructions,
14 clearing brush along that ditch, and more importantly,
15 where their district main tiles will have to cross the
16 project area because that affects not just the area
17 where the project is going, it affects every acre of
18 farmland upstream in the watershed if something should
19 happen.

20 So are you willing to allow them access to
21 get in to fix and maintain those underground tile
22 drains and to maintain that ditch so that we continue
23 to have satisfactory drainage?

24 THE WITNESS: Absolutely. We have our

1 drainage consultant Tom Huddleston who will speak to
2 more detail of it, but essentially we do a survey
3 before construction, we identify any -- of particular
4 concern is headers or larger tiles draining adjacent,
5 nonparticipant properties to make sure that they have
6 a clear route that's designed into the solar facility,
7 and access would absolutely be -- our -- our
8 operations management would build a relationship with
9 the local canal maintenance people and it would be, I
10 think, as simple as giving them a key to have them --
11 to the gate if they wanted or letting them in at their
12 request to access the canal, yep.

13 MR. FOUREZ: Okay. That's all I've got
14 for right now.

15 MR. KAINS: Mr. Greenwell, did you have
16 questions?

17 MR. GREENWELL: Yeah, I do.

18 As far as decommissioning, how often are
19 sites decommissioned? I -- I find it hard to believe
20 that this will ever go back to agricultural use,
21 that's why I ask the question.

22 THE WITNESS: That's a fair question.
23 I -- my belief is it -- it may go back as a function
24 of the value of agricultural produce versus energy in

1 the 35 years from now, 2060. You know, the benefit of
2 this development is that it is reversible. When you
3 build a community and have homes and streets and, you
4 know, malls and shopping centers, they don't go away
5 ever, the land is gone. The advantage of this type of
6 development is that it is reversible and I see no
7 reason why -- I mean, as I've talked through the --
8 how I see the decommissioning, there's no reason why
9 we wouldn't do that if the landowner of the day said I
10 want to farm this land, take it back, of course, we
11 would. Why wouldn't we. We'll have that money set
12 aside to do it is how we see it.

13 Now, if the landowner says, no, we'd like to
14 continue with the solar, I think we'd work with them
15 as a -- to repower it. You know, I think we've put
16 enough flexibility in the way the commercial
17 agreements are -- are papered that we will be able to
18 negotiate with them as we approach the limit of life,
19 but what you're -- you don't think --

20 MR. GREENWELL: Well, I'm just --
21 obviously the benefit now is to lease out the land for
22 solar and I don't know that that's going to change in
23 the future with, Ag land prices, agricultural prices,
24 I -- and I know you don't know the answer either

1 but --

2 THE WITNESS: No. But, you know, I
3 guess, if you look back to say 35 years ago in the
4 1980's where the land value was at and lease prices
5 at, maybe a similar change would occur in the next few
6 years. But I did have a conversation with a farmer at
7 another project I'm developing in Ohio last week and
8 he was adamant and he said, I would be -- love to be
9 the first farmer back after 35 years of -- that land's
10 in Fowler, he didn't expect he would be around by
11 then, but the -- whoever is would -- the intent is
12 they -- they inherit a vibrant soil.

13 MR. GREENWELL: Are there other sources
14 other than wind and solar in the bi plan, any other
15 development?

16 THE WITNESS: Technologies?

17 MR. GREENWELL: Yeah.

18 THE WITNESS: Besides wind and solar?
19 Not really, no. And they're one in the same in a way,
20 right? Wind power is just sort of a natural
21 concentration of solar energy because the winds are
22 created by, you know, the thermal heating of the land
23 from the sun. So in a way they're the same I would
24 like to think. But if another technology comes along

1 it will be assessed and compared against this
2 wonderful technology that we have. I mean, solar is
3 pretty incredible where we're at today as far as the
4 energy generated for the impact.

5 MR. GREENWELL: I think that's all I
6 have.

7 MR. KAINS: Mr. Puzey.

8 MR. PUZEY: Yes. Looking more on this
9 agreement with Fairmount I see there's no figure
10 that's actually quoted in the resolution, but for the
11 record it's my understanding according to the local
12 paper that it's \$5,000 per year and \$10,000 on
13 completion; is that correct?

14 THE WITNESS: I'm looking at Christy
15 who's more directly involved in that. I -- that --
16 that sounds about right. I know there was some
17 negotiation with them of the numbers that were going
18 around, but that's about -- yes.

19 MR. PUZEY: All right. And my second
20 question is about other community benefit agreements
21 that might be for neighbors or for the Town of
22 Jamaica, will there be any consideration for them
23 since they are nonparticipants in all these other
24 agreements?

1 THE WITNESS: No. No. There's --
2 accomodation was made for Fairmount because they had
3 this mile and a half delineation of control as we saw
4 it, so to build in that, within that mile and a half
5 we needed their support. But I don't believe that
6 the -- Jamaica has a similar power, if you will.

7 MR. PUZEY: Okay. Well, there's --
8 there's three neighbors up and down the road right
9 there and they're literally across the road from where
10 these solar panels are.

11 THE WITNESS: Well, we fully expect that
12 the County of Vermilion will support them via the
13 property tax that we pay to the county, some of that
14 will go to the benefit of --

15 MR. PUZEY: Individuals or the schools?

16 THE WITNESS: Well, the community.

17 MR. PUZEY: Community?

18 THE WITNESS: The community in general,
19 you know, the county and the board I'm sure, however
20 they see fit to distribute the funds. The expectation
21 is that those funds go to the benefit of the community
22 in large.

23 MR. PUZEY: So the county could support
24 the Jamaica Township for their roads or for their

1 general funds?

2 THE WITNESS: Yeah. That's up to them,
3 right?

4 MR. PUZEY: Thank you.

5 MR. KAINS: Any other questions for
6 Mr. Crighton from members of the Wind and Solar
7 Committee?

8 MR. PUZEY: One more. When you're going
9 to be -- using these piledrivers, is that just during
10 the day?

11 THE WITNESS: Yes. They need the light
12 to work. Probably 7 a.m., till 6 p.m., or something
13 like that.

14 MR. PUZEY: Okay.

15 THE WITNESS: Yeah, we -- not be
16 tolerable at night probably, yep.

17 MR. PUZEY: Yeah, noise travels a long
18 distance out there.

19 THE WITNESS: It goes pretty fast.

20 MR. PUZEY: Thank you.

21 MR. KAINS: All right. Thank you,
22 Mr. Puze.

23 Questions now for Mr. Crighton from members
24 of units of local government, including Vermilion

1 County Board members and members of local school
2 districts. Are there any questions from members of
3 units of local government?

4 Questions from other interested parties?
5 Anybody in the general public with questions you may
6 come forward. Mr. Keyt will direct you where to sit.
7 Any questions for Mr. Crighton from members of the
8 general public?

9 Yes, sir. Please come forward so we can have
10 you give your name and hometown so we know who you
11 are.

12 Okay. Sir, could you please state your name.

13 MR. ROHRSCHEIB: Yeah, my name is Vernon
14 Rohrscheib.

15 MR. KAINS: Could you please spell your
16 last name for the record.

17 MR. ROHRSCHEIB: R-O-H-R-S-C-H-E-I-B.

18 MR. KAINS: And what's your hometown?

19 MR. ROHRSCHEIB: Fairmount, Illinois.

20 MR. KAINS: You live in Fairmount, very
21 good.

22 Okay. Mr. Rohrscheib, you may ask questions
23 of Mr. Crighton relating to his testimony.

24 MR. ROHRSCHEIB: Okay. I would like to

1 ask about the agricultural impact mitigation
2 agreement. Is this considered to be the maximum or
3 the minimum amount of decommissioning procedures or
4 other operating procedures that the county can
5 request?

6 THE WITNESS: It's minimum. I would
7 believe the ordinance actually has additional.

8 MR. ROHRSCHEIB: Now, I -- I do have a
9 question on what -- am I allowed to ask more than one
10 question at a time?

11 MR. KAINS: Oh, certainly.

12 MR. ROHRSCHEIB: Okay. My second
13 question is about the land taxes that you said -- I'm
14 going to call them land taxes, we can call it
15 commercial real estate taxes, though, that's what it
16 will be. We've tried to get an answer but we cannot
17 get an answer from people we have asked.

18 During the decommissioning it is my
19 understanding that these taxes will continue until the
20 land is back into the agricultural use and possibly
21 one more year just through the fact of the ability to
22 change the taxation from commercial to -- back to
23 farmland, and is there a provision, because as I'm
24 doing the math in my head and the taxes are always a

1 year late, that that can be a minimum of probably
2 three years of commercial real estate tax due, is that
3 going to be a part of the remediation moneys that the
4 county has to use, and I'm specifically asking if the
5 decommissioning is caused by a cessation of assets of
6 the operating company, and that is, how will this
7 commercial real estate taxing be handled during
8 decommissioning?

9 THE WITNESS: During decommissioning,
10 you know, we fully have to pay the tax on the -- the
11 property tax during the decommissioning time period
12 which will be, you know, less than the installation
13 time period. So it will be a partial season. Whether
14 the farmers are able to get a crop in that season,
15 maybe, you know, if we -- we start decommissioning in
16 January, maybe they could even get a crop in in March,
17 but subject to performance, I suppose is what you're
18 getting at, what if it takes a couple years before the
19 agricultural is back up to 100 percent.

20 MR. ROHRSCHEIB: And we have been told
21 by various county officials that the decommissioning
22 tax will take time to do, that it will not be an
23 automatic. It will, in fact, take multiple years to
24 get that reassessment and that change made.

1 THE WITNESS: That's how I understand it
2 too.

3 MR. ROHRSCHEIB: I assume it's going to
4 be \$1,000 an acre by your figures because, you know,
5 1.4 million dollars and 1,400 acres is \$1,000 an acre
6 on the full project.

7 THE WITNESS: Yeah. The tax actually
8 comes from the State -- Illinois State program based
9 on the megawatts, but you're right, that's -- that
10 comes out to about 1,000, but we're only actually
11 using 1,000 acres, so I guess a little -- little
12 higher than that. But to your point, I get what
13 you're saying, it seems fair that until the land is
14 proven to be back up to its yield that it had prior to
15 construction we may fold with property taxes as
16 that -- is that a suggestion --

17 MR. ROHRSCHEIB: Yes, that's exactly.
18 Is that included in your decommissioning?

19 THE WITNESS: I'll have to research
20 that, but that's actually a good idea. Let me take
21 that back, because the reality of that would be if the
22 land is more productive afterwards, after a 35 year
23 rest we'd be getting -- would we get compensated.

24 MR. ROHRSCHEIB: No.

1 THE WITNESS: But, no. But I hear you,
2 I hear what you're saying. That's -- so we let the
3 farmers work the land, measure the yields that they
4 obtain after it, look back at the preconstruction
5 yields that they were getting and compare it and then
6 they can make whole over the number of years.

7 MR. ROHRSCHEIB: Yeah. And the other
8 part, who holds the -- who's responsible for
9 monitoring all of these decommissioning funds?
10 Everybody says it's the county, but what office do you
11 have to file this with and -- so the local landowners
12 will know that funds are actually available, they
13 can -- where can they go to see these -- what is being
14 held and if they are being maintained?

15 THE WITNESS: Well, we give the
16 security -- the surety to the county. What you do
17 with that at that point I'm not sure, but it would be
18 presumably publically registered with a surety
19 company.

20 MR. ROHRSCHEIB: I'm not trying to be
21 antagonistic.

22 THE WITNESS: Oh, no. I --

23 MR. ROHRSCHEIB: They need to give us
24 some details --

1 THE WITNESS: Yeah.

2 MR. ROHRSCHEIB: -- cause we're talking
3 about very, very large sums of money here. The last
4 decommissioning quote I've had from another company
5 that has leases that I actually have leases in my
6 briefcase with me that they offered was telling me
7 that it was \$250,000 for 40 acres or roughly, you
8 know, 4 to \$6,000 an acre to decommission them and so
9 we're talking a lot of money for even 1,000 acres --

10 MR. KAINS: Excuse me, Mr. Rohrscheib.
11 I think Mr. Fourez the chairman of this committee may
12 have an answer for you --

13 MR. ROHRSCHEIB: Okay.

14 MR. KAINS: -- cause the witness doesn't
15 know.

16 MR. FOUREZ: When you asked about how
17 they -- when they do the five year update.

18 MR. ROHRSCHEIB: Yeah.

19 MR. FOUREZ: As I understand it and when
20 we put the ordinance together they submit that to the
21 county. If we feel the need as a county to bring in
22 an outside consultant to go through those numbers to
23 make sure they're -- that would be at the project's
24 expense not the County's expense and there's already

1 provisions in there that that would -- could in all
2 eventuality be turned over to an engineering
3 consultant to look those numbers and verify that
4 they're accurate. Now, that would kind of be the
5 process that the county go through.

6 MR. ROHRSCHEIB: Right. Now, all I'm
7 asking, Steve, is just who is in charge of this money?
8 I'm trying to make it -- but it's just like so the --
9 okay. This and that could happen. We're talking
10 about --

11 THE WITNESS: Well, yeah. Yeah. Okay.
12 The surety the County's in charge of, but the
13 decommissioning is on us. So really the surety we
14 fully expect would be returned to us. So we will go
15 and decommission the site, inspectors will come and
16 confirm that we have decommissioned it accurately and
17 then they will -- will tear up the surety essentially.

18 MR. ROHRSCHEIB: But, again, which
19 office is it, the treasurer, the clerks, the chairman
20 of the board, somebody's got to be -- somebody's got
21 to be able to write a letter and say where is this,
22 has this bond been renewed or have these security's
23 been maintained. That's my basic -- that's my
24 question.

1 MR. KAINS: Mr. Rohrscheib, this witness
2 doesn't know, but perhaps during a break somebody from
3 the county could address that with you.

4 MR. ROHRSCHEIB: Okay.

5 MR. KAINS: Very good. Thank you, sir.
6 Are there any other -- are there any other questions
7 for Mr. Crighton from the public with respect to his
8 testimony?

9 Yes, sir. Please come forward. Good
10 morning, sir.

11 MR. MARK PUZEY: Good morning.

12 MR. KAINS: Could you please state your
13 name.

14 MR. MARK PUZEY: Mark Puzey.

15 MR. KAINS: Can you spell your last name
16 for the record.

17 MR. MARK PUZEY: P-U-Z-E-Y.

18 MR. KAINS: Actually, spell your first
19 name for the record.

20 MR. MARK PUZEY: Mark, M-A-R-K.

21 MR. KAINS: Okay. Sometimes it's with a
22 C. All right. Mr. Puzey, you may go ahead.

23 MR. MARK PUZEY: I had a couple of
24 questions concerning some information you gave. You

1 were talking about the selection of this site and then
2 you talked about the fact that it is flat, it's easy
3 to build on and it has a transmission line running
4 through it. You also talked about solar irradiance
5 and said that -- and you kind of hesitated a little
6 bit, but you said it was accepted. So what on a scale
7 of 100, what is acceptable? What's the economic
8 threshold to -- as far as what you see in this area
9 versus say the deserts out west where obviously there
10 is a lot solar irradiation available?

11 THE WITNESS: Right. And we build and
12 we have projects in Nevada and we're building ones in
13 southern California, so they obviously do have a
14 higher irradiance, but the -- overall the model that
15 we have is, you know, extremely detailed. All our
16 inputs we get -- we get vendor quotes for all the
17 materials, we get the contractor's quote for the
18 construction and engineering and then we also put in
19 that model the energy production that's expected and
20 that's what I meant the annual energy production, we
21 call the AEP which is like a known quantity, so we
22 know how many watts of energy we get and it comes up
23 to -- then the question is how much will we sell it
24 for and that's -- that's fairly well known as well.

1 Now, the market can change, but generally
2 in -- in Illinois we know what we get for a kilowatt
3 hour, and we -- we will enter into a -- preferably
4 into a long-term agreement, 15 year offtake agreement.
5 So we put all those numbers into the model and they
6 meet our corporate internal rate of return, right, but
7 that's all it's getting at. I don't feel comfortable
8 saying what that number is, but it's -- it's a very
9 low risk-type of project so it doesn't need a massive
10 return. We know that the demand for electricity is
11 solid. We believe it will be continually in demand,
12 at least the price. There are also -- so we do a --
13 we'll get a 15 year, probably around there, long-term
14 energy offtake agreement and then we have estimates
15 for what the price of energy is going to do from the
16 year '60 and on, and that's where some uncertainty
17 comes in, that's -- that's some of the developer's
18 risk, because if the price of electricity for some
19 reason plummets in the 2040's that will be bad for
20 economics, but all our expectations and our, you know,
21 expert assumptions and models show the price of energy
22 continuing to increase.

23 MR. MARK PUZEY: I had another question
24 kind of related to the Fairmount community benefit

1 agreement, and the question was asked subsequently
2 about neighboring nonparticipating landowners. So
3 there's no economic benefit for nonparticipating
4 landowners to be in support of the project, they don't
5 get anything out of it. For example, my real estate
6 taxes aren't going to go down from this project.

7 THE WITNESS: Well, I don't know. I
8 mean, if the money that -- that goes into the county,
9 this 1.4 million roughly annual number, a decent
10 proportion of that goes to the Salt Fork and other
11 school boards in the county, so they'll use to hire
12 teachers, improve their education program, then the
13 area gets known for having a strong school system,
14 that attracts people to move here and your property
15 values go up. So you -- yeah, your property taxes
16 could go up due to that. But -- but I think the
17 community benefits economically whether you were a
18 project participant or not just due to the -- you
19 know, we rely on our governments to spread the
20 taxation that they get.

21 MR. MARK PUZEY: But you tend to agree
22 in this day and age that 1.4 million dollars is
23 relatively low in the grand scheme of things?

24 THE WITNESS: Well, but here's the

1 thing, though, a development like this doesn't take
2 any county inputs to support it. It's not like a
3 residential development where you now have snow
4 clearing and -- and medical and schools and
5 infrastructures to build to support that development.
6 This is really just a cash entity to the county, like
7 it's not -- I don't see where -- maybe there's a
8 little more road maintenance but not even because we
9 fix the road after construction and then thereafter
10 there's just three employees, I mean, besides coming
11 to the site. It's not like we're going to be
12 increasing the costs on the county. I don't -- I see
13 it as a, like, one of the strongest developments that
14 could come into a community.

15 MR. MARK PUZEY: Concerning the
16 employees that will be required for this project, you
17 mentioned that this is going to be a union project.
18 What about nonunion jobs?

19 THE WITNESS: Well, the world we're in,
20 this community will be assumed as union construction.
21 Now, the post-construction, the operation's people
22 don't have to be.

23 MR. MARK PUZEY: So -- but would you
24 consider hiring nonunion people for the construction

1 of this project?

2 THE WITNESS: I don't think so. I mean,
3 we build in some areas, we do build nonunion, that
4 project I mentioned in Bakersfield is nonunion, that
5 one in Maryland is nonunion, but to the best of our
6 advice that we've got local general contractors and
7 including a general contractor who has what we call
8 double breasted, they can build union or nonunion, but
9 we talked to them, when they look at this area they
10 say union. So we're -- we're actually a none, but I'm
11 happy with union or nonunion myself. I do find that
12 for electrical works the IBEW, they -- they do an
13 excellent job in training their apprentices and
14 journeymen, so you kind of -- using union electrical
15 workers is a good way of getting quality work done.
16 So, you know, I'm very supportive of unions actually.

17 MR. MARK PUZEY: One other question
18 about the condition of the lands after
19 decommissioning.

20 THE WITNESS: Yes.

21 MR. MARK PUZEY: You stated in a couple
22 different -- in a couple different times that you
23 think there's a -- a real possibility that you will --
24 or the landowner will end up with land that's better

1 than when you started the project. How many times has
2 that happened across the United States?

3 THE WITNESS: Well, I -- yeah, I mean,
4 I've not traveled to the future and come back to so I
5 can't speak to -- obviously I'm joking, but the -- the
6 reason I say that is based on conversations with
7 agricultural workers who have like that fellow I
8 suggested that I talked to last week in Ohio who --
9 who thought that having the land and sitting fallow
10 with a vibrant mix of local grasses growing on it for
11 35 years through -- we have a -- our landscape
12 architect here Jason who would be able to speak
13 shortly who can get into this better, but the way the
14 root systems work in those grasses actually supports,
15 improve the aeration of the soil and drainage, you
16 know, getting over my skis here, but the -- the top
17 soil, I mean -- I guess I can't say really, no. I
18 hope and we'll do everything that we can --

19 MR. MARK PUZEY: Because you're going to
20 let the land sit fallow with grasses, improving soil
21 tilled and soil fertility and then you're going to run
22 heavy equipment over it to pull all of your equipment
23 off of it.

24 THE WITNESS: Well, it will be track

1 equipment. Those pile drivers and the pile removers
2 are all track. So they -- they should have a low
3 ground bearing pressure than the tractors, and that's
4 really a one time thing, because we'll use the roads
5 to take all the panels that's going to be a flatbed
6 driving on the road, and by 2060 I imagine it would be
7 a robotic machine that lifts the panels off and puts
8 them on the truck, and then the piles -- you're right,
9 we'll be able to reach the piles from the roads and it
10 will be track equipment that drives down. It doesn't
11 take long to pull a pile up, you put some upward force
12 on it and vibrate it and it comes right out, you put
13 it on the thing and move on, so it's a -- it's a short
14 duration.

15 MR. MARK PUZEY: So during
16 decommissioning what kind of weather conditions are
17 they going to operate in? Are they going to wait
18 until it's dry?

19 THE WITNESS: I believe, yeah. That's a
20 good idea. That's a good idea. I mean, and maybe do
21 it during the winter. If the ground's frozen that
22 would be an ideal time to do it. But, no, I can't --
23 I can't actually for the record say we will do this in
24 any one given month, but having said that, it would

1 behoove us to do it when it's dry because it's a lot
2 quicker. So as a contractor if you want to get in and
3 get the work done and get out as fast as possible and
4 having the site dry it is -- it is more expedient.

5 MR. MARK PUZEY: One other question
6 about the operating capacity. You've reduced it to
7 180 megawatts, is that the maximum operating capacity
8 or is that the average yearly capacity that you expect
9 to --

10 THE WITNESS: That's a maximum
11 operating.

12 MR. MARK PUZEY: What is the average
13 that you expect to get off of it?

14 THE WITNESS: Oh, I don't have that
15 number off the top of my head. That's actually --
16 that's a good one. The -- I can -- I can get that for
17 you. I can put that in the public record. That comes
18 down to what is the AEP, the annual energy production,
19 right. So it will be -- if it's 180 maximum, like, on
20 an annualized basis, significant.

21 MR. MARK PUZEY: And the reason I ask is
22 all of these green energy projects state the nameplate
23 capacity, they don't state what it actually produces
24 and I think that's a little misleading to the public.

1 THE WITNESS: Maybe, yeah.

2 MR. MARK PUZEY: Not intentionally,
3 but --

4 THE WITNESS: Well, no, actually it --
5 it's a -- it's a response to how the equipment is sold
6 and how the project's built, right, and I realize they
7 don't generate at night and -- and they don't generate
8 as much during cloudy conditions but they do generate
9 some, but overall I think it's like a 30 percent
10 capacity factor that we get here, just the 30's.

11 MR. MARK PUZEY: One last question and
12 that's related to the construction and I think we got
13 into this as far as broken panels, etc.

14 THE WITNESS: Yeah.

15 MR. MARK PUZEY: Are these panels coated
16 such that the glass doesn't go everywhere? Is it a --
17 is it a composite, like a windshield of a car?

18 THE WITNESS: Yes.

19 MR. MARK PUZEY: So it stays in one
20 piece?

21 THE WITNESS: Yes. I've picked them
22 up -- I've picked them up on the ground when I've been
23 on the site and seen broken panels --

24 MR. MARK PUZEY: Okay.

1 THE WITNESS: -- you can -- you can kind
2 of crinkle like -- almost like your phone.

3 MR. MARK PUZEY: Because -- and another
4 reason I ask, I think a question was asked about a
5 tornado. We -- in the last ten years we had a tornado
6 within a half mile of us -- well, within a quarter
7 mile of the site.

8 THE WITNESS: Okay. Well, and the truth
9 is we would have insurance for extreme weather events,
10 presumably so. I mean, I actually leave it to our
11 engineer consultant is here as well so he might be
12 able to speak what he's seen as far as when operations
13 down. He may have seen tornados. Is that a recent
14 uptick in tornados locally than the standard record?

15 MR. MARK PUZEY: I don't know that it's
16 an uptick but it's not unheard of by any means.

17 THE WITNESS: Well, we take that into
18 knowing that the engineer did.

19 MR. MARK PUZEY: And you do -- you do
20 expect it to happen in this part of the country?

21 THE WITNESS: Yeah. Okay.

22 MR. MARK PUZEY: Okay. Thank you, sir.

23 THE WITNESS: Okay. Thank you.

24 MR. KAINS: Very good. Thank you.

1 Mr. Puzey.

2 All right. Mr. Crighton has been on his feet
3 for about an hour and 15, hour and 20 minutes and
4 we're going to take a recess, allow our court reporter
5 Jamie to rest her fingers for a little bit, she's been
6 flying along, and Mr. Crighton can have a seat and
7 also come up with an answer for one of Mr. Puzey's
8 questions.

9 So it is 10:43. We're going to take about a
10 12 minute recess and the committee will resume this
11 hearing at 10:55 a.m.

12 Thank you.

13 (A recess was taken at 10:43 a.m.)

14 (Resume at 10:58 a.m.)

15 MR. KAINS: Okay. Jamie, let's go back
16 on.

17 All right. The public hearing with respect
18 to Mural Energy's Solar Energy Application is back in
19 session.

20 Mr. Rupert Crighton remains on the witness
21 stand.

22 Mr. Crighton, for the record, do you
23 understand that you remain under oath?

24 THE WITNESS: I do.

1 MR. KAINS: Okay. Very good.

2 All right. We were asking questions of
3 Mr. Crighton. We were at the point where the general
4 public is asking questions.

5 Are there any other persons in the general
6 public with questions for this witness?

7 Very good.

8 Questions for Mr. Crighton from either the
9 counsel for Vermilion County or Vermilion County
10 consultants?

11 Mr. Keyt.

12 MR. KEYT: I have a few.

13 **CROSS-EXAMINATION,**

14 **QUESTIONS BY MR. ANDREW KEYT:**

15 Q. Mr. Crighton, if I understand correctly,
16 you've had some testimony that the panels are able to
17 withstand tornados or hail. Do you know what the wind
18 rating is or the tornado rating is for any of the
19 panels?

20 A. No, I'm sorry, I do not.

21 Q. Okay.

22 A. I'm sure they do have one because that's
23 typical of equipment.

24 Q. Do you know if you have a witness coming

1 up --

2 A. Yes.

3 Q. -- with some documents that could attest
4 to that?

5 A. Yeah, we do.

6 Q. Okay.

7 A. Our engineer.

8 Q. Gotcha. I understand that right now
9 there's no batteries proposed for the facility. Is
10 there some plan in the future to have battery storage?

11 A. There's not at this point.

12 Q. Okay. Mr. Puzey had asked you about
13 deliveries to the site, and I guess I'm trying to find
14 out a little bit more information about that.

15 A. Right.

16 Q. Is there -- do you know how many
17 deliveries there would be to the site?

18 A. Well, that number that was suggested,
19 17,000 trucks is I think that's our engineering
20 assumption, but, you know, as I stated earlier, the
21 panels are larger, we might use fewer, so that's a
22 high estimate.

23 Q. Understood. Are any of the trucks,
24 would they -- any of them be overweight on the roads?

1 A. There is a main power transformer
2 required for the project and it would need a special
3 heavy permit, but that's a singular truck.

4 Q. During the construction process are you
5 able to provide to the committee a list of the
6 equipment that you might have on site?

7 A. Absolutely, yes. Our contractor will
8 have to keep that -- a list updated weekly and report
9 that to us. We could have it shared with you.

10 Q. Understood. Would you be able to
11 provide that to the -- this committee at some point in
12 time even if it's a general?

13 A. Yeah, general one I could, but, you
14 know, we haven't actually consummated a contract.

15 Q. If during the construction other than
16 deliveries would there be any traffic on the road of
17 heavy equipment perhaps going from one site to the
18 other?

19 A. There could be but that would not be the
20 intent. The intent is it gets delivered in and taken
21 to the array field where it's going. However,
22 construction, something can come up, there might be
23 the situation where you have to take it to the
24 laydown, unload it there and then retranspose it

1 later. But that would not be the construction plan,
2 that would be mitigation.

3 Q. Understood. Is there any -- is there
4 any fill or clean fill that you'll have to take from
5 another site to this site or any of the sites where
6 there are proposed for where the panels will be?

7 A. I don't believe so.

8 Q. So all of the -- if I'm understanding
9 correctly, all the dirt work could take place within
10 the individual sites?

11 A. Yes. Yes. That's correct.

12 Q. You talked a little bit about the piling
13 aspect and driving the piles is going -- I would
14 assume be the loudest portion of the construction?

15 A. Right.

16 Q. Do you know the -- what the decibel
17 levels are?

18 A. I don't, but I -- I will expect our
19 engineering expert consultant could give some guidance
20 to that. But I have been on site when it's done, of
21 course, the operator is wearing full ear protection
22 and -- but once you get it, you know, you're a couple
23 hundred yards away, it's not distinguishable, I can
24 tell you that. It's not -- it's not so much the pile

1 driving and that's what it's kind of referred to,
2 these piles are more the machine grabs it on the top
3 and pushes down while "vibratorying" it. So it --
4 it's more of a vibratory compression. So it's not the
5 pile driving that is actually misnomerized.

6 Q. Okay. I understand. Is it -- when you
7 say it's not distinguishable, not distinguishable from
8 what?

9 A. From the other milieu noise around a
10 construction. There's -- there's panels going on and
11 there's trucks and that sort of thing. So the pile
12 driving is -- we call it pile driving, but, again --
13 but the pile installation, it's not like it's dominant
14 once you're a bit of a distance away.

15 Q. Okay. Understood. Is there -- to the
16 adjoining parcels that may be nearby, so parcels that
17 are not participating in the project but
18 nonparticipating parcels that may be nearby --

19 A. Right.

20 Q. -- are you able -- and I understand this
21 may not be a question you can answer -- are you able
22 or is during that piling or process of putting the
23 piles in place are you able to remain within the
24 pollution control board limitations?

1 A. Yes.

2 Q. Is there a sound study that would
3 reflect that --

4 A. There is.

5 Q. -- in relation specifically to the
6 piling?

7 A. Well, we have our acoustic consultant
8 here who will speak to that.

9 Q. Okay. I think you mentioned the life of
10 the project is roughly 25 years?

11 A. Well, 35 years.

12 Q. 35.

13 A. 35 years, but the modules are -- the
14 vendors guarantee them for 25 years. So we'll see, I
15 suppose, but the project is 35 years.

16 Q. What happens if at the -- at the
17 conclusion of that warranty for the panels is the plan
18 to remove them and put new panels in or is the plan to
19 leave those in place for that ten year period where
20 they're unwarranted?

21 A. I think leave them in place, yeah. It
22 would be a -- a study done by our operations or asset
23 management team that would make the final call on
24 that.

1 Q. Okay.

2 A. But what we -- the output would slowly
3 go down, it would be a cost benefit analysis of do we
4 replace the panel and get it back up or do we let them
5 degrade and just sell less energy.

6 Q. Do you -- for the life of the special
7 use are you asking for a 25 year period for the
8 special use or a 35 year period?

9 A. 35.

10 Q. Well, hold on. Give me one second.
11 Because she's not sworn in yet to give any testimony.
12 But if you want to defer the question for --

13 A. Yeah, I think I will because I'm trying
14 to pull it up, I -- so I'll defer.

15 Q. That's fine. I just want to make sure.

16 A. Yeah.

17 MR. KEYT: Okay, sir. I think that's
18 all the questions I have for you.

19 THE WITNESS: Thank you.

20 MR. KAINS: Thank you, Mr. Keyt.

21 Ms. Kennedy, any redirect?

22 MS. KENNEDY: Not at this time.

23 MR. KAINS: Okay. Very good. Thank
24 you.

1 All right. Mr. Crighton has been on the
2 stand for a while, are there any other final questions
3 from members of the Wind and Solar Committee for this
4 gentleman? This is your last chance to ask him
5 questions.

6 MR. GREENWELL: Will someone else
7 address Wildlife?

8 THE WITNESS: Yes.

9 MR. GREENWELL: Okay.

10 MR. KAINS: Mr. Puzey.

11 MR. PUZEY: It's my understanding you're
12 the project manager. There is a different name in our
13 booklet here, Duygu Gul.

14 THE WITNESS: She is the project
15 manager, I'm the project director.

16 MR. PUZEY: Okay.

17 THE WITNESS: So Duygu reports to me and
18 I provide guidance and some direction for the team
19 including Duygu. She is eight months pregnant so
20 couldn't make this trip, and we will be bringing in a
21 PM to take her spot while she takes mat. leave.

22 MR. PUZEY: Okay. Thank you.

23 MR. KAINS: Any other questions for
24 Mr. Crighton from members of the Wind and Solar

1 Committee? Very good.

2 Mr. Crighton, you may step down.

3 THE WITNESS: Thank you.

4 MR. KAINS: You will be excused as a
5 witness.

6 (Witness excused.)

7 Ms. Kennedy, call your next witness.

8 MS. KENNEDY: Thank you. Steve Burns,
9 please.

10 S T E V E B U R N S,

11 was called as a witness on behalf of the Petitioner
12 and, having been first duly sworn, testified as
13 follows:

14 MR. KAINS: Very good. All right. Sir,
15 could you please state your name, spelling your first
16 and last names or the record.

17 THE WITNESS: Steven Burns, S-T-E-V-E-N,
18 B-U-R-N-S.

19 MR. KAINS: Very good.

20 Ms. Kennedy, your witness.

21 **DIRECT EXAMINATION,**

22 **QUESTIONS BY MS. COURTNEY KENNEDY:**

23 Q. Could you please tell us a little bit
24 about your educational history and background.

1 A. Sure. So I'll try to make it brief.
2 Out of high school I joined the Navy, that's where I
3 learned basically to operate power plants through
4 their nuclear training program. Worked at waste to
5 energy facility for ten years. After that I worked at
6 a combined cycle and gas turbine facility for ten
7 years. Moved around from what was simple cycle and
8 gas turbine plants for a few years and about four
9 years ago became involved in solar through the company
10 that I work for.

11 Q. Do you hold any degrees, licenses or
12 certifications?

13 A. No, just a lot of experience.

14 Q. And how are you presently employed?

15 A. I'm employed by Algonquin Power as the
16 Director of thermal and solar.

17 Q. And what business is Algonquin Power's
18 primary location?

19 A. So the part that I'm with we operate
20 power plants, mostly renewable, there's a couple
21 thermal plants, but mostly wind and solar.

22 Q. How long have you been with Algonquin?

23 A. Almost nine years.

24 Q. And you mentioned that your job title is

1 the director of thermal and solar, but what
2 responsibilities does that position entail?

3 A. Yeah, so when one in the operation's
4 group, so once Rupert and his team is done they'll
5 leave a plan, my group comes in and we operate it for
6 the life of the project, we staff it and -- and
7 operate it.

8 Q. And are you familiar with the applicant
9 in this instance Mural Energy, LLC?

10 A. Yeah.

11 Q. And how so?

12 A. It's a large solar plant planned to be
13 booked around here, 180 megawatts.

14 Q. And you mentioned earlier that you are
15 familiar with solar energy projects. At what point
16 are you brought into the project? After it's gone
17 through permitting?

18 A. Yeah. So where we typically get mostly
19 involved is through construction, around commissioning
20 time we try to staff it up, as far as having the
21 operators on the site, early on and maybe even some
22 questions about operations the group may ask, but we
23 get heavily involved near commissioning timeframe just
24 before the project goes commercial.

1 Q. Have you worked on any solar farms that
2 have been sited in Illinois?

3 A. No.

4 Q. What is the largest solar farm that
5 you've worked at?

6 A. About 120 megawatts.

7 Q. Mural Energy plans to own and operate
8 the solar farm; is that correct?

9 A. Yes.

10 Q. Have you ever come across a situation
11 where a panel breaks during the construction or
12 operation's process?

13 MR. KAINS: Ms. Kennedy, before he
14 answers that question I'm going to ask Mr. Keyt to --
15 Mr. Keyt, do you have any objection to this gentleman,
16 Mr. Steven Burns testifying as an expert witness?

17 MR. KEYT: I do not, no.

18 MR. KAINS: Okay. Very good. He's in.
19 I believe he has enough experience, you know, with
20 Mr. Crighton, he testified as to his engineering
21 background, and so -- but I am going to -- based upon
22 Mr. Burns' experience working on solar projects,
23 including one up to 120 megawatts I believe that
24 Mr. Burns is an expert witness, and he'll be treated

1 as such. And you may go ahead with your question.

2 MS. KENNEDY: Thank you.

3 **QUESTIONS BY MS. KENNEDY:**

4 Q. Mr. Burns, I believe that the question I
5 asked was have you ever come across a situation where
6 a panel on a solar farm breaks during the construction
7 or operation's process?

8 A. Yes.

9 Q. And have you personally seen that?

10 A. Yes.

11 Q. And what happens?

12 A. If it's during operations we will take
13 that panel out of service, replace it with a new one
14 and dispose of the -- the damaged one.

15 Q. And have you ever personally witnessed
16 any leaching of any of the materials contained within
17 the panels?

18 A. No.

19 Q. In general, what is the proper procedure
20 for disposing of a broken panel?

21 A. So how we like to dispose of them is to
22 recycle them.

23 Q. And do you ever consult with like the
24 local authorities before you remove a panel and

1 dispose of it?

2 A. So if we were to consider a landfill we
3 would have to check with the local authorities if
4 that's appropriate, but, like I said, we prefer to
5 recycle.

6 Q. And are you familiar with the materials
7 that comprise these particular or proposed solar
8 panels?

9 A. Yes.

10 Q. Do you know the wind rating for these
11 proposed panels?

12 A. I do not, no.

13 Q. Is that something that we can provide to
14 the county at a later date?

15 A. Yeah. That's typically like a design
16 parameter that's, you know, built in the design of the
17 project.

18 MR. GREENWELL: I have a question.
19 Where would recycling take place?

20 THE WITNESS: I don't know exactly. The
21 company we used for our last project I believe was
22 down in Texas, the company was out of Texas that we
23 used.

24 **QUESTIONS BY MS. KENNEDY:**

1 Q. Would you say in those instances where
2 you can successfully recycle those panels, would that
3 come at a greater cost to the company than taking it
4 to a nearby landfill?

5 A. Yeah. So that particular project we
6 could have disposed it free of charge at the local
7 landfill, but in keeping with our company principles
8 we recycled them.

9 Q. Based on your experience and your
10 knowledge of the solar panels generally do you believe
11 that this project will impact the water quality of
12 nearby wells?

13 A. No.

14 Q. What about water runoff?

15 A. No.

16 Q. And are you familiar with the
17 maintenance of the solar farm once it's constructed?

18 A. Yes.

19 Q. And what, if anything, can you tell me
20 about that maintenance.

21 A. So most of it the on-site staff, they're
22 performing mostly visual inspections as far as being
23 proactive if something breaks, of course, you know,
24 they're -- they're doing reactive or corrective

1 maintenance, visual inspections, cleaning of filters,
2 some electrical testing on equipment, depends what
3 failures there are, but the preventative maintenance
4 is prescribed by the manufacturer and we follow those.

5 Q. How would the panels be washed?

6 A. There's different ways. You could just
7 use water and a brush, some places use chemicals. I
8 wouldn't anticipate having to wash here because there
9 should be enough natural rainfall to keep them clean
10 enough and snow actually does a pretty good job of
11 cleaning panels as well once it -- once it melts off.

12 Q. What type of vegetation management is
13 typically utilized at solar farms in this area?

14 A. I can't speak to this area but I can
15 speak to projects that we have when we use, you know,
16 mechanical mowers and we also use robotic mowers at
17 one site and we use sheep as well.

18 Q. Is this site -- well, let me back up.
19 Will this site be remotely monitored?

20 A. Yes, we have a little operation's center
21 that monitors it.

22 Q. And is that done periodically or is that
23 24/7?

24 A. That's not 24/7.

1 Q. And if so -- if a panel breaks will that
2 show on this electronic monitoring?

3 A. Depends on the failure mode, but if
4 there's a short circuit then that would certainly show
5 up and that -- a short circuit would be common for a
6 major failure.

7 Q. Once this project is operational will
8 hazardous material be on site?

9 A. Not -- no, not typically.

10 Q. And have you personally seen any damage
11 to panels from tornados or high winds?

12 A. We had one project that experienced high
13 winds and damaged the panels.

14 Q. Where was that at?

15 A. In Virginia.

16 Q. And, again, was this type of activity,
17 would that be picked up on remote monitoring?

18 A. Yeah, that's -- well, yeah, that's how
19 we knew there was a fault, we went to investigate the
20 fault, saw the panels had been damaged.

21 MR. GREENWELL: Could you expound on
22 what the damage was, how severe.

23 THE WITNESS: Like what we saw? Yeah.
24 So probably I think it was just one row, maybe about

1 20 feet, a 20 foot width of panels actually came off
2 and then, you know, near there they were somewhat
3 deformed.

4 MR. ELMORE: You mentioned hazardous
5 materials and how they're handled, you said not
6 typically. What would be an example of?

7 THE WITNESS: I can't think of one
8 that's why I said not typically. Depending on
9 activities are going on, but we don't handle hazardous
10 chemicals.

11 MR. ELMORE: Okay.

12 THE WITNESS: I don't know what
13 contractor may do on a special job.

14 MR. KAINS: Mr. Puzey.

15 MR. PUZEY: Yeah. Is there any instance
16 where a damaged panel would be left in place during a
17 period of time or is it always going to be replaced
18 fairly quickly?

19 THE WITNESS: Well, in the period of
20 time it takes us to find it and, you know, schedule
21 repairs, that's about --

22 MR. PUZEY: But it won't be left off
23 line for hundreds of days or --

24 THE WITNESS: No. No. No. That

1 effects production and -- and -- you know, that's our
2 job is to keep production as high as -- as high as we
3 can.

4 MR. KAINS: Mr. Greenwell.

5 MR. GREENWELL: How often are they
6 visually inspected?

7 THE WITNESS: So the entire field -- we
8 do a visual inspection of the entire field once a
9 year. It's typically like two percent of -- two
10 percent a week to get the whole site done in the
11 course of a year.

12 MR. KAINS: All right. Ms. Kennedy.

13 MS. KENNEDY: Thank you.

14 **QUESTIONS BY MS. KENNEDY:**

15 Q. In your experience of the solar projects
16 that you've been on or witnessed have you encountered
17 any drainage issues?

18 A. We've had a couple sites that have had
19 drainage issues.

20 Q. And can you tell us about those issues
21 that were experienced and what remedies, if any, were
22 sought.

23 A. Just some local flooding in the PV array
24 area, and what we did is we have a civil engineer as

1 part of our engineering group that we worked with him
2 to, you know, remediate it so that we wouldn't have
3 local flooding.

4 Q. Are you familiar with a complaint
5 resolution plan that's been proposed for this project?

6 A. Yes.

7 Q. And on behalf of the applicant do you
8 intend to abide by it?

9 A. Yes.

10 Q. And as a general practice with your
11 experience with Algonquin does Algonquin welcome local
12 input and train with local fire and protection
13 districts?

14 A. Yeah. I think it's good to have a good
15 relationship with fire department. We try to have
16 them, you know, come to the site, get oriented, get
17 familiar so that in the unlikely case something
18 happens they're a little more up to speed.

19 Q. And do you commit to walking through the
20 site during the constructions and operations phase of
21 the project with those local fire protection
22 districts?

23 A. So definitely during operations, that's
24 where my -- you know, my -- my -- I take over, so

1 definitely in operations.

2 MS. KENNEDY: I believe that's all I
3 have.

4 MR. KAINS: All right. Very good.
5 Thank you, Ms. Kennedy.

6 All right. Questions, cross-examination of
7 Mr. Burns first members of the Vermilion County Wind
8 and Solar Committee? Any other questions from the
9 Committee?

10 Mr. Fourez.

11 MR. FOUREZ: Yeah. You've talked about
12 the mowing or the sheep or what, and part of the
13 ordinance that we have requires that it be put into
14 pollinator acres, using pollinator protocol. So how
15 exactly does that change the way you approach,
16 maintain the cover under it?

17 THE WITNESS: Yeah. So it -- it would,
18 depending on what the requirements of those
19 pollinators are, where they are, so it would change
20 how we would mow, absolutely. I'm not familiar with
21 all the details, but, you know, if it's a pollinator
22 program in place and if we have to comply by it then
23 that's what we do.

24 MR. KAINS: Any other questions from

1 members of the wind -- okay. Mr. Puzey.

2 MR. PUZEY: Back to the question about
3 nonunion labor. Who's going to be doing the mowing?
4 Can it be somebody that's not union?

5 THE WITNESS: We -- we likely would
6 choose somebody local. Depends who can do it, right.
7 We're like anything else, you know, we solicit bids
8 for work and whoever is best fit to do it. I don't
9 have a preference either way myself, it's whoever can
10 do the best job for a decent price.

11 MR. PUZEY: Okay. Thank you.

12 MR. KAINS: Any other questions from
13 members of the Wind and Solar Committee?

14 Questions for Mr. Burns from members of
15 unions of local government, including the Vermilion
16 County Board and school districts?

17 Questions from other interested parties,
18 members of the public? Any questions from the public
19 for Mr. Burns? Yes, sir, Mr. Rohrscheib.

20 And, again, folks, this is Mr. Vernon
21 Rohrscheib from Fairmount. Go right ahead.

22 MR. ROHRSCHEIB: Okay. My first
23 question is, are you the person that will be in
24 charge -- the drainage was mentioned, I didn't know if

1 there would be another engineer that would be coming
2 about later to explain to us how tiles will be located
3 and marked through the systems, but if you're
4 operational. In all of these we have multi-size
5 drainage tiles anywhere from 36 down to 4 inches of
6 drains and each requires a different method of repair
7 and maintenance over multiple 35 years. So will you
8 be the person I should be directing those questions to
9 or will there be a better engineer that will tell us
10 the actual procedures?

11 THE WITNESS: So it would be better to
12 wait on an engineer. I would be the guy in charge of
13 finding them to help make -- make repairs, but I don't
14 have that level of expertise to speak how repairs
15 would be done.

16 MR. ROHRSCHEIB: Then as the number one
17 concern I have as a local landowner and area farmer is
18 the size of the equipment that is needed to make these
19 repairs, and in your operational plan is there a
20 method to get those in and out? Will there be any
21 thought process to bringing in small hi-ho's or
22 something that they -- most of them, they don't look
23 like they have enough room to accommodate backhoes or
24 equipment to get through if we need to make repairs,

1 you know, if we have collapses, some of these are
2 relatively old and that -- that's the -- and that was
3 my question about drainage.

4 THE WITNESS: Yeah. So we would work --
5 like I said, we would work with -- with an engineer to
6 get a solution and they would generally farm it out,
7 you know, subcontract it out to somebody and work with
8 them, see what's in front of you and see how you best
9 make a repair.

10 MR. ROHRSCHEIB: Since you mentioned it
11 that you had drainage and it sounds like you were,
12 that -- did -- how -- how did you accommodate getting
13 equipment in and out amongst all of these panels?
14 That's my thing, how do we do it? That's more than
15 that, you know. Is there -- did you have to remove
16 panels to bring things in or what?

17 THE WITNESS: Yeah. So the two repairs
18 of the two projects that I spoke to we didn't have to
19 remove any panels or racking to effect repairs or
20 drainage, we were able to work.

21 MR. ROHRSCHEIB: Okay. And -- you, of
22 course, you take over after the operation is done. Is
23 there anything in these as far as we have a -- a
24 increasing number of Canadian Geese in the area and a

1 huge number of, at least to me, like a huge number of
2 deer also increasing between these, will they provide
3 any operational issues more than would be sighted for
4 this area?

5 THE WITNESS: So I -- I can't speak for
6 this area specifically, but at other sites we have
7 Canadian Geese, it doesn't really affect operation,
8 deer make their way in and out, it doesn't really
9 affect operation.

10 MR. ROHRSCHEIB: Even with -- even with
11 the fence in the area they can get through the --

12 THE WITNESS: It's amazing, yeah.

13 MR. ROHRSCHEIB: Okay.

14 THE WITNESS: I don't know about all of
15 them but certainly some of them will.

16 MR. ROHRSCHEIB: My last here is, and I
17 apologize for not being able to speak to Mr. Crighton
18 on it, I wasn't thinking about it, but there is an
19 operating gravel quarry in this area that owns the
20 property right down against your westward area. Have
21 you been in consultations with them about their
22 planned activity and how close they can operate to you
23 and how -- and what the effects of that is between
24 their drilling and dynamiting activities and land

1 activities over in -- over in this course of time that
2 is also their operational time?

3 THE WITNESS: So I have not. But that
4 would be a conversation that I would have with them
5 and just see, you know, what kind of work they're
6 doing in the area. We try to be good neighbors and
7 we're pretty quiet neighbors, we don't really -- once
8 the site's up and running there's not really a lot
9 that goes on, but if you're saying it may impact our
10 operation, when you mention that I'm thinking dust,
11 you know.

12 MR. ROHRSCHEIB: Lot of dust.

13 THE WITNESS: Maybe we could plant it
14 before it rains or something, or, you know, we'll try
15 to work with them to --

16 MR. ROHRSCHEIB: The -- and my concern
17 is will that change the setback you have to have from
18 some sort of an operation like that or would change
19 some of, you know --

20 THE WITNESS: Yeah, I'm unfamiliar with
21 that. I wouldn't know what the setback requirement
22 would be, but, in general, tends to make sense, but
23 I'm unsure.

24 MR. ROHRSCHEIB: Okay. That's all I

1 have.

2 MR. KAINS: Thank you, Mr. Rohrscheib.
3 Any other questions for Mr. Burns from members of the
4 public? Very good.

5 Questions for Mr. Burns from counsel for
6 Vermilion County or Vermilion County consultants.

7 Mr. Keyt.

8 MR. KEYT: I think there was one fellow
9 in the back.

10 MR. KAINS: Oh, I'm sorry. I didn't see
11 it.

12 MR. KEYT: He was late on the draw.

13 MR. KAINS: Come on up, sir. Good
14 morning.

15 MR. CRIST: Donald Crist, D-O-N-A-L-D,
16 C-R-I-S-T.

17 MR. KAINS: And where are you from,
18 Mr. Crist?

19 MR. CRIST: The big metropolis of
20 Indianola.

21 MR. KAINS: Indianola. Very good. Go
22 ahead with questions for Mr. Burns.

23 MR. CRIST: These may have been already
24 asked and I didn't make every committee meeting or

1 anything. So, I don't know, may be redundant, but if
2 they are you committee members can tell me and I'll
3 sit down.

4 I had a question about these inverters.
5 There's 59 inverters. What do the inverters run on?

6 THE WITNESS: Well, so what an inverter
7 does, it converts DC to AC power and it's kind of
8 self-powered that way, all right. There's no DC thing
9 so it's not running.

10 MR. CRIST: So it's a -- you know, I've
11 got an inverter and it runs on gasoline.

12 THE WITNESS: Oh, I see what --

13 MR. CRIST: So, I mean, you've got 59
14 inverters. Are they solar powered?

15 THE WITNESS: Well, yeah.

16 MR. CRIST: Are they -- they're run by
17 the electricity you're generating. So they're not
18 diesel powered? They're not -- they're not gasoline
19 powered? You don't have 59 engines running?

20 THE WITNESS: No. No. No. They're
21 powered from the solar panels in the field.

22 MR. CRIST: Very good. Very good. I
23 just -- I didn't know and that struck me.

24 The manufacturer of -- you said you have

1 several of these already up and running. You must
2 have a favorite manufacturer of solar panels. I mean,
3 who do you use?

4 THE WITNESS: Not really --

5 MR. CRIST: Do you use several or do
6 just put out for a local bid?

7 THE WITNESS: Yeah, I mean, that's more
8 Rupert's area, but from my observation we get panels
9 from different manufacturers based on availability.

10 MR. CRIST: I gotcha. Do you happen to
11 know the names of some of those manufacturers, I mean,
12 you've maybe used? It sounds like you're going --

13 THE WITNESS: Canadian Solar is the most
14 recent. Honestly, I can't think of the other one.

15 MR. CRIST: And you're a Canadian-based
16 company, right?

17 THE WITNESS: No.

18 MR. CRIST: Algonquin is?

19 THE WITNESS: Yes, they're out of the
20 Toronto area.

21 MR. CRIST: The recycling, you said you
22 used a company in Texas, but you could have thrown
23 them in -- put them in the landfill for no cost. I
24 don't -- I know what it costs me whenever I take it to

1 the landfill, but when you're recycling how many
2 recyclers do you use when you have a need to recycle
3 and where are they at? Do you have a couple of names
4 and locations?

5 THE WITNESS: So there is the only one
6 that I dealt with is that I'm familiar with and I -- I
7 don't want to misspeak the name, it was --

8 MR. CRIST: Well, could you give it to
9 the committee later?

10 THE WITNESS: Yeah.

11 MR. CRIST: That would be great. And,
12 matter fact, you might do that same thing with the
13 manufacturer.

14 THE WITNESS: Of the panels?

15 MR. CRIST: Yeah.

16 THE WITNESS: Yeah.

17 MR. CRIST: You're taking a low bid and
18 you're working with two or three different counties,
19 you got two or three manufacturers that -- that might
20 be nice that the committee might like to know that.

21 And I think that's all for me.

22 MR. KAINS: Very good. Thank you,
23 Mr. Crist.

24 MR. CRIST: Thank you.

1 MR. KAINS: Anyone else from the public
2 with questions for Mr. Burns?

3 Questions from you Mr. Keyt.

4 MR. KEYT: Yeah, I've got a few.

5 **CROSS-EXAMINATION,**

6 **QUESTIONS BY MR. ANDREW KEYT:**

7 Q. Mr. Burns, you talked a little bit about
8 impact about -- to water runoff or water quality, and
9 your indication that there would not be an impact
10 water runoff or water quality. Taking them one at a
11 time, water runoff. Why do you think there will not
12 be an impact water runoff?

13 A. Well, prior to the project being
14 developed it comes with a storm water plan to manage
15 that runoff during rain. So we follow that and
16 maintain that plan, assuming the plan's approved that
17 it won't have an impact.

18 Q. That is a plan that has to be approved
19 by the State?

20 A. I'm not sure who does the approval, if
21 it's State or county, I'm not sure.

22 Q. Okay. Second part of it is water
23 quality, why do you think it will not have an impact
24 on water quality?

1 A. I haven't received any evidence that
2 there has been.

3 Q. Okay. So the lack of evidence in your
4 mind is that there hasn't been an impact as far as you
5 know?

6 A. Yes.

7 Q. Is that a yes?

8 A. Excuse me?

9 Q. Is that a yes? Did you say yes?

10 A. Yes. Sorry. Yes.

11 Q. That's for the court reporter's benefit.

12 A. I gotcha.

13 Q. Okay. You've mentioned that you had a
14 project I believe in Vermont that had some damage from
15 high wind?

16 A. Virginia.

17 Q. Virginia, I'm sorry. That project, what
18 size of a project was that?

19 A. That's an 80 megawatt project.

20 Q. Roughly half the size of this project?

21 A. True, yes.

22 Q. All contiguous property for that 80
23 megawatts or is it spread out in like -- this one had
24 multiple parcels spread across various areas?

1 A. Yeah. So that project has two --
2 they're very close. They're two separate areas
3 accessed separately.

4 Q. Is it the same racking system and panels
5 that would be utilized for this? And I don't
6 necessarily mean manufacturer but just the same type
7 of design?

8 A. I'm not sure I understand the question.
9 But the panels that were damaged were tracker, it was
10 a tracker system and I believe that this project has
11 tracker panels as well.

12 Q. In other words, my point being, is it a
13 similar system to what's being proposed here, and it
14 sounds like your answer is yes?

15 A. I believe so.

16 Q. Okay. That system in Virginia that had
17 some high winds, do you know how -- what the winds got
18 up to? If you know, I don't want you to guess.

19 A. I don't know that. That was -- yeah, it
20 was a frustrating part of our investigation but...

21 Q. Was it straight line wind or tornado?

22 A. We didn't have any reports of a tornado
23 so we're assuming that it was not a tornado.

24 Q. Were any of the panels dislodged?

1 A. Yes.

2 Q. When they became dislodged did they come
3 off of the racking system that they're on?

4 A. Yes.

5 Q. How far did they travel away from
6 those -- those racking system it was attached to?

7 A. Yeah, my observation, it just traveled
8 like the row in front or in back of that row that was
9 damaged.

10 Q. Okay. So it was within --

11 A. Like ten feet, let's call it.

12 Q. How many of them were dislodged, if you
13 know?

14 A. Well, I can't give you a definitive
15 answer but it was about -- I think it was about 15
16 feet or so, so that's like half a dozen panels maybe,
17 I'm not positive.

18 Q. You mentioned one -- you mentioned
19 another protect that there was some drainage issues
20 associated with that. Can you tell the committee a
21 little bit more about what that was.

22 A. So we just had some, you know, pooling
23 of water that wouldn't drain, and this area has a high
24 water table anyway so it was -- it's always kind of

1 wet and damp, so it was just one area that just didn't
2 drain and so we just improved the drainage to get it
3 off site.

4 Q. Where was that located?

5 A. In Maryland.

6 Q. Was it on an agricultural field or a
7 vacant lot?

8 A. I'm not sure what it was prior to the
9 solar project getting there.

10 Q. Do you know the type of soil-type for
11 that project?

12 A. I do not, no.

13 Q. Do you know if it was similar to the
14 project that we have here?

15 A. If I didn't know that one --

16 Q. Understood.

17 A. -- then I don't -- I can't answer that.

18 Q. Do you know if there were any drain tile
19 associated with that property?

20 A. I don't know. I apologize.

21 Q. That's okay. Do you know if it -- if
22 that drainage issue had followed a drain event -- or,
23 I'm sorry, a rain event?

24 A. It was an area that's slow to drain and,

1 you know, when it would rain, yes, it would pool and
2 it would be slow to drain so we made some changes to
3 improve that.

4 Q. All right. And were there neighboring
5 properties that were impacted or just the property
6 that it housed the solar?

7 A. Just on the PV site, the solar site.

8 Q. Okay.

9 MR. KEYT: That's all the questions I
10 have for Mr. Burns. Thank you.

11 MR. KAINS: All right. Mr. Keyt, do you
12 have any consultants or staff members from Vermilion
13 County in the room who would be asking questions?

14 MR. KEYT: No.

15 MR. KAINS: Okay. Good. So I'll just
16 ask you for questions on behalf of the County.

17 MR. KEYT: No. That's fine.

18 MR. KAINS: Ms. Kennedy, redirect.

19 MS. KENNEDY: I have nothing further for
20 Mr. Burns.

21 MR. KAINS: Okay. Very good. Final
22 questions then for Mr. Burns comes from members of the
23 Vermilion County Wind and Solar Committee?

24 MR. GREENWELL: The complaint resolution

1 plan was mentioned but then could you talk about that
2 plan a little bit.

3 THE WITNESS: Yeah. I haven't looked at
4 it in detail but it describes what to do should we
5 receive complaints, the process of following and
6 recording those complaints. So it's a process
7 procedure that we would follow should the project get
8 complaints.

9 MR. GREENWELL: That's all I have.

10 MR. KAINS: Any other questions from the
11 committee for this witness?

12 Very good. Mr. Burns, thank you. You may
13 step down.

14 THE WITNESS: Thank you.

15 MR. KAINS: You're excused.

16 (Witness excused.)

17 MR. KAINS: Ms. Kennedy, at the
18 conclusion of Mr. Crighton's testimony you had
19 referenced two exhibits. Are you moving for admission
20 of the Application and the Fairmount Community
21 Agreement?

22 MS. KENNEDY: Yes, please. And I'm
23 happy to -- I mean, I can move to admit as we go if
24 that's your preference.

1 MR. KAINS: Yeah, let's just do that,
2 just to make sure we have them in.

3 MS. KENNEDY: Sure.

4 MR. KAINS: So you're moving for
5 admission. Mr. Keyt?

6 MR. KEYT: No objection.

7 MR. KAINS: All right. Those are in,
8 the Application is an exhibit that has already been
9 reviewed by members of this committee, but it is in
10 evidence as is the Agreement with the Village of
11 Fairmount.

12 All right. One other thing that came to my
13 mind, Ms. Kennedy, when Mr. Burns was testifying, he
14 referred -- or deferred something to Mr. Crighton.
15 We're not going to have Mr. Crighton come back on the
16 stand. Could you just find out those answers and
17 perhaps an offer of proof later on, get that
18 information onto the record and -- or the documents
19 into the hands or at least a statement on your part so
20 the board knows the answers to these questions.

21 MS. KENNEDY: Yes, absolutely.

22 MR. KAINS: Okay. Very good. All
23 right.

24 How long do you think your next witness is

1 going to go?

2 MS. KENNEDY: I mean, I think I'm
3 willing to try to get him done before noon.

4 MR. KAINS: Okay. Very good. Go ahead
5 then.

6 MS. KENNEDY: I'd like to call August
7 Christensen to the stand.

8 MR. KAINS: All right. Mr. Christensen,
9 could you please raise your right hand to be sworn.

10 AUGUST CHRISTENSEN,
11 was called as a witness on behalf of the Petitioner
12 and, having been first duly sworn, testified as
13 follows:

14 MR. KAINS: Very good. Thank you. Now
15 your name is August Christensen?

16 THE WITNESS: Correct.

17 MR. KAINS: Could you please spell your
18 last name.

19 THE WITNESS: C-H-R-I-S-T-E-N-S-E-N.

20 MR. KAINS: And -- all right.

21 Ms. Kennedy, go right ahead with
22 Mr. Christensen.

23

24

1 **DIRECT EXAMINATION,**

2 **QUESTIONS BY MS. COURTNEY KENNEDY:**

3 Q. Tell us about your educational history.

4 A. Yeah, I have a Bachelor's of Science in
5 Civil Engineering from North Dakota State University.
6 I've been practicing engineering for 19 years, 16 of
7 those have been in renewable energy.

8 Q. And do you hold any other degrees,
9 licenses or certifications other than what you just
10 mentioned?

11 A. No.

12 Q. How are you presently employed?

13 A. With Westwood Professional Services.

14 Q. And what business is Westwood primarily
15 engaged in?

16 A. Private developments, engineering,
17 surveying, construction support, those types of
18 activities.

19 Q. Mr. Christensen, I'm going to ask you to
20 speak up, if you don't mind.

21 A. Sure. Yeah.

22 Q. And what are your job responsibilities
23 with Westwood?

24 A. I'm a principle solar engineer and so my

1 responsibilities include overseeing our engineering
2 teams at the work on the projects, providing guidance
3 and expertise in solar.

4 Q. And you might have mentioned this and if
5 so I apologize, but how long have you been employed by
6 Westwood?

7 A. Nineteen years.

8 Q. What experience, if any, do you have
9 working on solar farms?

10 A. I've been working in solar energy for 13
11 years. I've -- you know, projects ranging in size
12 from 1 megawatts up to 1.5 megawatts and collectively
13 I've probably, you know, supported around 20 to 30
14 gigawatts of solar.

15 MS. KENNEDY: At this time I'd ask that
16 he be tendered as an expert witness.

17 MR. KAINS: Yes. Very good. Mr. Keyt.

18 MR. KEYT: No objection.

19 MR. KAINS: All right. Mr. Christensen
20 has sufficient education, training and background to
21 be considered an expert witness and will be treated as
22 such.

23 Go ahead, Ms. Kennedy.

24 **QUESTIONS BY MS. KENNEDY:**

1 Q. What is your involvement typically with
2 like on a solar energy facility?

3 A. We provide the engineering consultant.
4 We put the -- the layout together, you know, we -- our
5 team also has all the surveys that we're working on,
6 you know, figuring out the land control and, you know,
7 identifying the setbacks from property, residences.
8 But putting the layout together, drainage,
9 geotechnical, structural, high voltage wire and
10 everything.

11 Q. And is it a fair statement to say that
12 the work that you do is primarily the development
13 phase of the solar energy facilities?

14 A. Actually both, development and
15 construction.

16 Q. Are you familiar with Mural Energy, LLC?

17 A. Yes.

18 Q. And how so?

19 A. We did the site plan engineering as well
20 as developed a study.

21 Q. Are you being paid for your time
22 testifying today?

23 A. No.

24 Q. Did you, in fact, prepare a site plan

1 for this project?

2 A. Yes.

3 Q. And it's the site plan -- or I would
4 call it a site plan, it's actually several documents,
5 was that included as an appendix to the application
6 binder?

7 A. Yes.

8 Q. And have those since been revised since
9 this application binder was submitted to the county?

10 A. Yes, and those have been resubmitted.

11 MS. KENNEDY: I have an exhibit to pass
12 out. Is that all right?

13 MR. KAINS: Could you identify the
14 exhibit, what is it?

15 MS. KENNEDY: This would be the revised
16 site plan.

17 MR. KAINS: The revised site plan?

18 MS. KENNEDY: Yes. And for the record's
19 sake, I also have one of these, it's marked as C300 of
20 that revised site plan that is up on the screen here.

21 MR. KAINS: Pass one back to Mr. Fourez.

22 Mr. Keyt, could you please mark this as
23 Applicant's Exhibit 3.

24 MR. KEYT: Yes, we've marked it Group

1 Exhibit 3.

2 MR. KAINS: Absolutely.

3

4 **QUESTIONS BY MS. KENNEDY:**

5 Q. Mr. Christensen, I've got one of the
6 maps of the site plan set, this one is labeled C300
7 pulled up on the screen. Can you see it here.

8 A. Yes.

9 Q. And are you familiar with this?

10 A. Yes.

11 Q. And did you prepare this map?

12 A. Yes, we did.

13 Q. And did you prepare everything and the
14 revised set plan set?

15 A. Yes.

16 Q. And did you prepare this in the ordinary
17 course of your business and in anticipation of today's
18 hearing?

19 A. Yes.

20 MS. KENNEDY: At this time I'd like to
21 move that this be admitted.

22 MR. KAINS: Mr. Keyt.

23 MR. KEYT: No objection.

24 MR. KAINS: All right. Applicant's

1 Group Exhibit 3 is admitted in evidence.

2 **QUESTIONS BY MS. KENNEDY:**

3 Q. Are the boundaries of the project shown
4 on the site plans?

5 A. They are, yeah.

6 Q. And are all proposed structures shown on
7 the site plans?

8 A. Yes.

9 Q. Are the solar panels themselves shown?

10 A. Yes.

11 Q. What about the substation?

12 A. The substation is shown in a general
13 area in the center of the site plan sheet there.

14 Q. What about the location voltage of any
15 overhead transmission lines?

16 A. Yes.

17 Q. Are the property lines shown on these
18 revised site plan sets?

19 A. Yes.

20 Q. What about setback lines?

21 A. Yes, those are on there.

22 Q. Are the location of any known subsurface
23 drainage tiles shown on these maps?

24 A. Yes, they are. There's information

1 shown on the plans. They were gathered from
2 information that the landowners provided to us.

3 Q. Those would be the participating
4 landowners; is that correct?

5 A. Yes.

6 Q. And what, if anything, is left with
7 the -- aside from what you've just mentioned to
8 identify and discover location of drainage tiles?

9 A. We've looked up some sonaring that we
10 could find just from the desktop perspective, see if
11 we can identify any inlets or if there's any -- you
12 know, sometimes the tile lines can be visible from a
13 wet area or aerial taken during wet conditions.

14 Q. Will a drain tile survey be performed at
15 a later date?

16 A. Yes.

17 Q. And are you willing to provide the
18 county with a copy of that drain tile survey?

19 A. Yes.

20 Q. To the best of your knowledge are there
21 any flood zone areas within the project's boundaries?

22 A. No, there are no FEMA flood zones.

23 Q. Have you identified on this revised site
24 plan set all existing structures with their uses?

1 A. Yes, those are shown.

2 Q. Are wetland locations shown on these
3 maps?

4 A. Yes.

5 Q. What about septic systems?

6 A. They normally would be but we didn't
7 have any septic systems within the area of the project
8 site.

9 Q. As such there's none depicted on the
10 maps?

11 A. Correct.

12 Q. What about wells?

13 A. Yeah, those are identified on the site
14 plans.

15 Q. Are existing easements shown on these
16 site plans?

17 A. Yes.

18 Q. I want to go through the setback
19 requirements of the Vermilion County Ordinance and
20 regulating solar energy facilities. Are you familiar
21 with setback requirements?

22 A. Yes.

23 Q. Will the project be set back 150 feet
24 from the nearest point on the outside wall or

1 structure of an occupied community building and
2 dwelling on nonparticipating properties?

3 A. Yes, the fence line.

4 Q. And is this measured -- well, let me
5 back up. On the revised site plan set that we've
6 presented today is that measured from the fence of the
7 project?

8 A. Yes.

9 Q. Will the project be set back 150 feet
10 from the nearest point on the outside wall of
11 nonparticipating residence?

12 A. Yes.

13 Q. And, again, is this measured from the
14 fence of the project and not the panels themselves?

15 A. Correct, it's from the fence.

16 Q. And will the project be set back 50 feet
17 from the nearest point of the property line to a
18 nonparticipating property?

19 A. Yes.

20 Q. I'm going to ask you the very same
21 question. This would be measured from the fence and
22 not the panels of the project themselves, right?

23 A. Correct.

24 Q. Will the project be set back 50 feet

1 from the nearest edge of the public road and
2 right-of-way?

3 A. Yes.

4 Q. And, again, is it measured from the
5 fence and not to the panels themselves?

6 A. That is correct.

7 Q. And all of these setbacks that I've just
8 gone through with you, are you these depicted on the
9 revised site plan set?

10 A. They are.

11 Q. Is any grading work needed on solar
12 projects generally?

13 A. Yes. It depends on the topography or
14 within the site itself.

15 Q. And what, if anything, can you tell me
16 about this proposed site.

17 A. So this site primarily is agricultural
18 land. There is some areas that we've identified that
19 would require some grading, you know, maybe to the --
20 you know, very minimal grading for this site, maybe a
21 maximum one foot cut, yeah.

22 Q. Compared to other projects that you've
23 been on would you consider grading work to be minimal
24 overall for a project of this size?

1 A. Yes. There may be some additional, like
2 ground smoothing just to, you know, make it safe for
3 the workers to walk across the site. But large
4 construction activities with a -- you know, large cut
5 hills, this is a -- very -- very typical.

6 Q. And are you familiar with how top soil
7 will be managed?

8 A. Yes.

9 Q. And what, if anything, can you tell me
10 about how that will be managed for this site.

11 A. Yeah, the top soil will stay within the
12 project boundary itself, you know, where the access
13 road will be located, that's -- that top soil will be
14 stripped and stockpiled or, you know, preserved
15 adjacent to that road, you know, in a manner not to,
16 you know, cause any drainage issues next to the road
17 itself, but the majority of the site, you know, not
18 having the grading will not have any top soil stripped
19 for those areas.

20 Q. Will top soil be sold or mixed in the
21 project?

22 A. No.

23 Q. Will it be transported off site?

24 A. No.

1 Q. You mentioned that Westwood was hired to
2 perform a -- well, to -- excuse me, to perform a
3 hydrology study. Did you, in fact, perform a
4 hydrology study for this project?

5 A. Yes, we did.

6 Q. And is that included as an appendix in
7 the application binder materials?

8 A. Yes.

9 Q. What is the purpose of a hydrology
10 study?

11 A. The purpose of this hydrology study was
12 to identify the -- what the existing, you know, flood
13 depths and velocities would be across the site to help
14 us identify the areas that would, you know, be high
15 risk for solar installation.

16 Q. And did you, in fact, perform that
17 study?

18 A. Yes, we did.

19 Q. Typically when you're performing a
20 hydrology study are there any conservative assumptions
21 that you use when you commission that study?

22 A. Not conservative assumptions, you know,
23 considering this site is a, you know, existing
24 agricultural land. You know, when we ran the

1 hydrology study we used the fallow conditions, the --
2 format number and that would generate, you know, more
3 than a -- you know, than a grass would.

4 Q. And what were your findings of that
5 hydrology study that you found?

6 A. That this site is suitable for solar
7 development.

8 Q. And are you familiar with the vegetation
9 plan proposed to be used within the project array?

10 A. Yes. That should be perennial
11 vegetation, you know, native seed mixture, pollinator,
12 you know, meeting the requirements of local -- local
13 requirements.

14 Q. And based on your experience and your
15 qualifications do you believe that the water runoff
16 will improve if this project gets built?

17 A. Yes. So the existing conditions, you
18 know, being a row crop has a higher runoff curve
19 number. The final vegetative, you know, conditions of
20 the site will have, you know, perennial and
21 vegetations growing and established on site, so, you
22 know, they'll -- you know, that with structure very
23 well help promote infiltration but it will reduce the
24 rates of the runoff and so the overall volume

1 generated from runoff on the site will reduce and the
2 water quality will improve.

3 MS. KENNEDY: I have nothing further.

4 MR. KAINS: Very good. Thank you,
5 Ms. Kennedy.

6 Questions for Mr. Christensen first from
7 Members of the Vermilion County Wind and Solar
8 Committee. Any questions from the Committee?
9 Mr. Puzey.

10 MR. PUZEY: Yes. With regards to this
11 particular drawing, what's the substantial change from
12 Revision B which was in our packet originally to C?

13 THE WITNESS: The revision from B to C
14 is we implemented the -- you know, the 150 setback
15 from the project boundary to the fence line --

16 MR. PUZEY: Okay.

17 THE WITNESS: -- so that we had to
18 adjust some of the layouts so we can -- so we could
19 maintain 180 megawatts, and so there -- there -- some
20 of the areas -- we're still within the project
21 boundary but we had to shift some of our panel to the
22 northern part of the area -- of the -- of the project.

23 MR. PUZEY: Can you point those out.

24 THE WITNESS: Yes. Here, I'll just walk

1 up there.

2 MR. KAINS: Yeah. Go right ahead.
3 Mr. Christensen, you might have to yell so the back of
4 the room can hear you. Oh, take Ms. Kennedy's mic.

5 THE WITNESS: So the panels that we're
6 talking about that, you know, once we adjusted the --
7 the boundary around the site we had to move panels up
8 here to this northern area where they previously were
9 not showing those, those are still within the original
10 permanent boundary, but they're here to continue to
11 get more production.

12 MR. PUZEY: Okay. I have one more
13 question in regards to the boundaries. It's my
14 understanding that you will not be building I'll call
15 it the northwest corner of the purple outline there.
16 At this time is there any plans to put a solar array
17 in there at a later date?

18 THE WITNESS: That could change with
19 further design as -- as design progresses and if there
20 is other items that I think are found during the, you
21 know, design process of -- for instance, if there's --
22 if there's a -- if there's a drain tile b-line that we
23 need to avoid we can shift a panel out of that area
24 and move it into the northwestern area. At this time

1 it's hard to -- hard to know for sure with a 2026
2 construction date if those panels become more
3 efficient and generate more electricity so we may not
4 need big equipment as shown at the fence line in that
5 area and may be reduced as well. So there is a chance
6 to have to go up to the northwest area.

7 MR. PUZEY: Okay. And when would that
8 decision be made, that would be prior to 2026?

9 THE WITNESS: Yes, sir. I don't know
10 when that decision will be made, I don't design the
11 schedule.

12 MR. PUZEY: Okay. But as of right now
13 the plan is to have only solar panels in the darkened
14 areas within that east side?

15 THE WITNESS: Yes, that's correct.

16 MR. PUZEY: Thank you.

17 MR. KAINS: Any other questions for
18 Mr. Christensen from the board?

19 MR. GREENWELL: I have one. You
20 mentioned a drain tile survey. What does that consist
21 of?

22 THE WITNESS: That's more of means and
23 methods during -- you know, for that being -- you
24 know, there's different ways that they can be

1 identified, you know, they can -- you know,
2 understanding where the inlets, the outlets are, they
3 could -- you know, someone could, you know, trace it
4 back. It's -- you know, there are some aerial survey
5 methods that could be done during specific -- or
6 during wet rainfall time at -- you have a nice
7 rainfall and then you have a nice hot day the next
8 day, you can -- you can see those with a thermal
9 imagery sometimes, but --

10 MS. KENNEDY: Mr. Facilitator, if I can
11 answer that.

12 MR. KAINS: Yes.

13 MS. KENNEDY: This might help streamline
14 things, but we do have a drainage expert here who can
15 probably get in and answer that more in-depth.

16 MR. KAINS: Okay. Very good. And we'll
17 take up those questions at that time.

18 MR. GREENWELL: Thanks.

19 MR. KAINS: Any other questions from the
20 Wind and Solar Committee for Mr. Christensen?

21 MR. FOUREZ: Okay. This one may go
22 between what we just talked about, but within this
23 revised plan is there anything where I can reference
24 showing where the planned vegetative screening is

1 planned to go?

2 THE WITNESS: Yeah, there -- within the
3 site plan starting at C300 there should be a -- it's a
4 thicker green dash line. I can maybe show you
5 afterwards, but there is a line in there indicating
6 where these screening locations would be located.

7 MR. FOUREZ: If it's in here I'll find
8 it?

9 THE WITNESS: Yes.

10 MR. KAINS: Any other questions for this
11 witness from the Committee?

12 Very good. Questions from members of units
13 of local government, including Vermilion County Board
14 Members and members of school district?

15 Questions from other interested parties and
16 members of the public? Any questions from the public?
17 Yes, Mr. Puzey.

18 Go right ahead, Mr. Puzey.

19 MR. MARK PUZEY: My first question
20 refers to the property setbacks and you said that the
21 revision stated that setback is now 150 foot from the
22 fence line to a nonparticipating property. What is to
23 be within that 150 feet assuming that there's not a
24 road or anything like that?

1 THE WITNESS: Yeah, so at this time it
2 is an open wide green space, you know, that could
3 potentially be leased to -- you know, or not leased,
4 but, you know, farmed by the farmer that's, you know,
5 leasing the property out. There could be screening
6 based on what the requirements are of the screening,
7 but at this point there is nothing out there, it's an
8 open green space.

9 MR. MARK PUZEY: So it's not a
10 requirement that there is vegetative screening? It
11 was my understanding that there was.

12 THE WITNESS: Right. There -- in
13 certain areas, depending what the requirements are of
14 the screening. I know that's going to be talked about
15 later so I don't want to --

16 MR. MARK PUZEY: And do you know if that
17 screening goes all the way around the boundary of the
18 fence line or is it only in select areas?

19 THE WITNESS: It's only in select areas.

20 MR. MARK PUZEY: And is there a map of
21 that?

22 THE WITNESS: Yes, it's on the site
23 plans that were previously submitted as well as the
24 new one.

1 MR. MARK PUZEY: Okay. You have on the
2 map up on the screen some areas that were not in the
3 original proposal back in early spring, what are the
4 blue and purple areas in the center in the main field?

5 THE WITNESS: That blue area going down
6 this -- the left -- on the right-hand side of major
7 spot that is -- I can't see it right there -- but the
8 purple areas -- let me get my -- okay. So the purple
9 area is an avoidance area, that's cultural and --

10 MR. PUZEY: That's cultural?

11 THE WITNESS: Cultural, yes.

12 MR. MARK PUZEY: Okay.

13 THE WITNESS: And then the blues are
14 proposed storm water basin locations.

15 MR. MARK PUZEY: And how are those storm
16 water basins conservative?

17 THE WITNESS: I mean, there's -- you
18 know, they're going to be, you know, a hole dug in the
19 ground, there's going to be outlets to catch the
20 runoff during construction and they'll be vegetated
21 and they'll have either -- they'll be designed to be
22 infiltrated, to put water into the ground or to
23 release it at a -- at a lower rate, a stream or a pipe
24 or an outlet over the side of the berm.

1 MR. MARK PUZEY: And how far in the soil
2 will those project?

3 THE WITNESS: They vary. They don't --
4 we try to minimize it at that because that just
5 increases the cost of those, so, you know, at maybe --
6 maybe two or three feet.

7 MR. MARK PUZEY: So they're significant
8 soil disturbance in those areas that would have to be
9 remediated later?

10 THE WITNESS: Yeah, those --

11 MR. MARK PUZEY: Would those be removed?

12 THE WITNESS: Yes, those would be --
13 those would be removed. Decompaction efforts would
14 be -- would be done to restore that ground.

15 MR. MARK PUZEY: And does your company
16 have experience doing that?

17 THE WITNESS: Yes, it does.

18 MR. MARK PUZEY: That remediation?

19 THE WITNESS: Yes. That's --

20 MR. MARK PUZEY: Of farm land like this?

21 THE WITNESS: Yes.

22 MR. MARK PUZEY: And are there studies
23 or could you make results of that available?

24 THE WITNESS: I don't know if I can make

1 results of that available because they're from
2 specific projects that we've worked on.

3 MR. MARK PUZEY: I guess I'm saying if
4 you disturb this soil it's never going to be what it
5 is today.

6 THE WITNESS: Right. So --

7 MR. MARK PUZEY: And so what -- you
8 know, I have a hard time believing that there's any
9 possibility that 35 years into the future land that is
10 returned to row crop farming is going to be in any
11 way, shape or form better than it is today.

12 MS. KENNEDY: I'm going to object to
13 that question.

14 MR. KAINS: I think it's kind of a
15 leading question but I'm going to overrule the
16 objection.

17 Jamie, could you read back the question,
18 please.

19 (The requested text was read back by the
20 reporter.)

21 THE WITNESS: Answer that?

22 MS. KENNEDY: Yes.

23 MR. KAINS: Please.

24 THE WITNESS: Yeah. Well, the -- so

1 standard practice would be that we remove the -- strip
2 that top soil, segregate that to the side and they
3 would do their -- you know, the earth work, you know,
4 that's required to build the basins. Once those
5 basins are constructed they will bring that -- that
6 top soil back on top of there so they can get
7 stabilization to -- when I say stabilization I mean
8 revegetation of that ground when it's -- you know,
9 during construction. If they are temporary ponds,
10 those -- that top soil, again, would be removed and
11 stockpiled to the -- again, to the site as they return
12 the elevation and they bring it back to what it was
13 prior to preconstruction conditions. Then they would,
14 you know, decompact any of that by using, you know,
15 tilling and then respread that top soil and vegetate
16 it with vegetation from the project.

17 MR. MARK PUZEY: I guess further -- my
18 original question is do you have evidence such that
19 after remediation will return land like this to its
20 full productivity? Has that ever occurred?

21 THE WITNESS: I mean, it's standard
22 procedure for all construction.

23 MR. MARK PUZEY: That -- that's not my
24 question.

1 THE WITNESS: I know. Yes. You know, I
2 guess I don't have that readily available, you know,
3 but there are many projects that we've built or
4 designed that have been constructed, you know, in
5 farm -- in cultural fields that have been
6 reestablished of vegetation afterwards, you know, and
7 with the land sitting fallow for 25 to 30 years it's
8 very similar to the, you know, CRP Programs, you know,
9 that were established, you know, I don't know if I
10 want to use the word established, but, you know,
11 that -- the land gets to sit there and there's no
12 tilling, there's no introduction of pesticides or
13 anhydrous or other fertilizer to get it to grow, so
14 it's sitting there. So once the project is done, part
15 of the decommissioning is to decompact from any type
16 of construction activity.

17 MR. MARK PUZEY: One other question.
18 This map is in the northwest corner of the main
19 cluster there directly south of Fairmount has a lot of
20 solar panels missing now from the plan and that was
21 the reduction. What happens to that ground?
22 Presumably that is to still be within a fenced area?
23 And what -- what is the disposition of that ground
24 that this is not going to solar at this time?

1 THE WITNESS: Right. So the fenced area
2 that Rupert mentioned earlier was that it's, you know,
3 more -- it should wrap around the -- around the
4 project site. So any areas that don't have panels now
5 would not have any -- you know, they -- they would be
6 left as the land is now.

7 MR. MARK PUZEY: So those are areas that
8 could be farmed?

9 THE WITNESS: Yes. If that's what's
10 discussed between the -- you know, the applicant as
11 well as landowners.

12 MR. MARK PUZEY: Okay. Thank you.

13 MR. KAINS: Very good. Thank you,
14 Mr. Puzey.

15 Any other questions for Mr. Christensen from
16 the public?

17 Yes, Mr. Rohrscheib.

18 MR. ROHRSCHEIB: I didn't think I had a
19 question but I'm really confused to -- if you would
20 elaborate in you're building these retention ponds for
21 the construction time or for the entirety of the
22 project.

23 THE WITNESS: I believe these are shown
24 for temporary conditions under construction.

1 MR. ROHRSCHEIB: Okay. Will they be
2 left in place or will they be returned -- you know,
3 like will they be left for the 35 years of the
4 duration of the project?

5 THE WITNESS: They are typically removed
6 at the end of construction. You know, the reason why
7 I say they're temporary is we didn't find any
8 requirements or permits or water managements, you
9 know, and also since we're reducing the runoff and
10 improving the water quality for the project post
11 construction that we wouldn't get any -- so from an
12 engineering perspective we didn't feel like there was
13 a need for any permanence from water controls on site
14 that were going to reduce them and improve the water
15 quality. For temporary conditions, you know, the --
16 you know, the contractor will, you know, have
17 operations up there where they're going to have -- you
18 know, there's going to be areas that are exposed and
19 the grading and so what these are intended to do is to
20 capture that run off and treat it -- and treat it to,
21 you know, reduce the sediments before it's released
22 out in the project into the drainage system out in the
23 district.

24 MR. ROHRSCHEIB: Okay. That was my

1 question to quantitate my market aspect.

2 Okay. It seems like this plan is still in
3 flux. So one of my main questions is can after the
4 permit is applied for is this as big as this project
5 can be or can there be more places added as long as
6 it's in the entirety of the original property? I
7 guess, how permanent is this site plan?

8 THE WITNESS: Well, I mean --

9 MR. ROHRSCHEIB: It can be shrunk -- I'm
10 sorry. I was talking about it could be shrunk if the
11 quality of the solar panels improves, but if there is
12 another contract can this project be increased on this
13 permit?

14 THE WITNESS: I believe any -- the land
15 that we have identified -- I know it's hard to see up
16 there right now, but there is a purple boundary around
17 it, but that's the site area that's being permitted
18 for solar development. So my understanding would be
19 that we would be able to, you know, stay within the
20 confines of that as long as we're still meeting all
21 the requirements that we're meeting for the design
22 that it is now.

23 MR. ROHRSCHEIB: Okay. So it is
24 possible to -- for it to grow also in size to a degree

1 without being repermited?

2 THE WITNESS: Yes, within the --

3 MR. ROHRSCHEIB: Within your outline?

4 THE WITNESS: Correct.

5 MR. ROHRSCHEIB: Okay. Is there a --
6 and my last question is, is there any allowance in
7 this project to increase it if another permit is
8 applied? Like is there a potential down the road plan
9 to make this project bigger? Are you allowing in your
10 engineering to add on more panels even outside and
11 bring them back into it?

12 THE WITNESS: No, we're not, because the
13 design that we're providing is for 180 megawatts.

14 MR. ROHRSCHEIB: Okay. And that would
15 be your limit. Okay.

16 MR. KEYT: Could I hold you there, sir,
17 for one just second.

18 MR. ROHRSCHEIB: Yeah.

19 MR. KEYT: You asked a question that I
20 can probably answer for you.

21 MR. ROHRSCHEIB: Okay.

22 MR. KEYT: In relation to whether they
23 can expand a project. When they apply for it and go
24 through this -- this process of a special use hearing,

1 they're confined with the design layout that they've
2 provided. So the answer to the question from the
3 county's perspective is they can't expand beyond what
4 is currently depicted in their site layout. So, in
5 other words, where the panels are depicted now, even
6 if it's within that purple boundary area, they
7 wouldn't be able to expand into that area because what
8 they've applied for and what they receive is a
9 special -- or a siting approval for the area depicted
10 here and it's -- they would not be able to expand
11 beyond that as where the panels are currently
12 depicted.

13 In other words, those areas that even if it's
14 within the fenced area but it's currently not depicted
15 as holding solar, they wouldn't be able to expand into
16 that area without coming back to the county and going
17 through this process again.

18 MR. ROHRSCHEIB: Can I ask a further.

19 MR. KEYT: Now, their developer about
20 how they feel about it, but that's -- essentially that
21 would be a county condition to what an approval would
22 be.

23 MR. ROHRSCHEIB: So to answer just a
24 question that came up, and I apologize if you've

1 already said it and I didn't hear it, the purple line
2 is where the fences are. So anything whether it being
3 built in or not, that will be where it will be fenced
4 in?

5 MR. KEYT: I think I can clarify that
6 with a question, but my -- my understanding, which I
7 am going to clarify when it comes around to me, but my
8 understanding is the purple, the project boundary
9 area, it's not necessarily the fenced area.

10 MR. ROHRSCHEIB: Okay. Thank you.

11 MR. KAINS: All right. Thank you,
12 Mr. Rohrscheib.

13 Question.

14 Good afternoon, sir. Could you please state
15 your name for the record.

16 MR. BODINE: Kevin Biodine, K-E-V-I-N,
17 last name's, B-O-D-I-N-E.

18 MR. KAINS: And where are you from?

19 MR. BODINE: Allerton.

20 MR. KAINS: Very good. Go right ahead.

21 MR. BODINE: Your engineering firm, did
22 they provide an rmp or risk management plan with the
23 information that you prepared for the company?

24 THE WITNESS: No, we did not provide a

1 risk management plan. I believe that is something
2 that the developer is preparing themselves.

3 MR. BODINE: The developer?

4 THE WITNESS: Yes.

5 MR. BODINE: Okay. That takes an
6 engineer I think to do that I thought.

7 THE WITNESS: Yes, but we were not on
8 the contract to provide that.

9 MR. BODINE: Will that -- will the
10 company have a contracted engineer to do the risk
11 management plans?

12 THE WITNESS: I'd have to defer that
13 question to the developer.

14 MR. KAINS: Just so we're clear,
15 Ms. Kennedy, do you know the answer to that question?

16 MS. KENNEDY: I don't readily offhand,
17 but I can check.

18 MR. KAINS: Let's -- let's find out and
19 do that by way of offer of proof.

20 MR. BODINE: What about standard
21 operating procedures? Your operations managers had --
22 it wasn't real clear on say if there was a tile broke.
23 What is the standard operating procedure to get that
24 tile replaced, or if there was a solar panel broke,

1 what's the standard operating procedures? Are they in
2 place to replace that and is that documented when it's
3 replaced?

4 THE WITNESS: I don't have the answers
5 to that. I know that they have those procedures in
6 place but I don't have that document with me to speak
7 that.

8 MR. BODINE: It should be on site.

9 THE WITNESS: I would -- I would agree,
10 but I don't have that in front of me right now -- but
11 I can't -- I can't speak to that at this moment.

12 MR. BODINE: Will there be any areas
13 that have berms or trees around it instead of fence?

14 THE WITNESS: The entire site will still
15 need to be encompassed by a security fence just for
16 protection from the public because it is a live solar
17 facility.

18 MR. BODINE: Shouldn't there be berms
19 required for -- along with where the water is to stop
20 any runoff?

21 THE WITNESS: That's what I mentioned
22 earlier, with the vegetation being on site, you know,
23 the runoff number -- or the runoff generated from the
24 site, that's going to be reduced and the water quality

1 is going to be increased.

2 MR. BODINE: That's all I have. I would
3 just -- can I make a recommendation to the committee
4 or to Mr. Keyt.

5 MR. KAINS: How about when you testify.

6 MR. BODINE: That's what I'm doing now,
7 isn't it?

8 MR. KAINS: No. You're asking
9 questions.

10 MR. BODINE: Okay.

11 MR. KAINS: We'll have a time for you --

12 MR. BODINE: Okay.

13 MR. KAINS: -- it will have to be
14 another day --

15 MR. BODINE: Okay. Thank you.

16 MR. KAINS: -- but thank you,
17 Mr. Bodine.

18 MR. BODINE: Thank you.

19 MR. KAINS: Any other questions for the
20 public for Mr. Christensen? Very good.

21 Mr. Keyt.

22 MR. KEYT: Okay.

23 MR. PUZEY: I have one more follow-up
24 question.

1 MR. KAINS: Okay. Sure, Mr. Puzey.

2 MR. PUZEY: Does this map or do you have
3 another map that shows the boundary that might be
4 trees and vegetation and so forth? I don't believe
5 this actually is shown -- included on that one.

6 THE WITNESS: Yeah. Let me check real
7 quick. You're right, it's not on this map but we do
8 identify those later on in the site plan sheets
9 themselves and that would be starting on page C500.

10 MR. PUZEY: Okay. Thank you.

11 MR. KAINS: Mr. Fourez.

12 MR. FOUREZ: I don't know if this is the
13 appropriate time to ask this, but I'm curious about
14 the relative placement of the fence, the setback and
15 any vegetative screening that the county requires.
16 How does that all fit together, or is there a better
17 time, better place to ask that question?

18 THE WITNESS: I know that there is
19 another consultant and contractor that was in charge
20 of vegetation screenings and they could probably
21 better answer than myself.

22 MR. KAINS: Very good.

23 All right. Mr. Keyt, your turn.

24 MR. KEYT: Okay.

1 **CROSS-EXAMINATION,**

2 **QUESTIONS BY MR. ANDREW KEYT:**

3 Q. Mr. "Burns," in reference to this map
4 above, the -- if I'm understanding correctly, there is
5 a cultural avoidance area depicted in purple and it
6 looks like there's only one?

7 A. Correct.

8 Q. What is that cultural avoidance area?

9 A. I don't have that information available
10 to me right now.

11 Q. The substation that's depicted there
12 looks like a crosshatch is how its depicted on the
13 map?

14 A. Yes.

15 Q. Is that going to be owned by Algonquin
16 or Mural, or is it going to be owned by Ameren?

17 A. Typically the project substation is
18 owned by the applicants and then they -- there may be
19 a switchyard there -- board that's going to be owned
20 by the utility that they're connecting into.

21 Q. You say typically, do you know for sure
22 in relation to this project?

23 A. I guess I'm just -- that's my
24 understanding of it, but that is not -- I don't know

1 about all the agreements.

2 Q. If I'm reading the map correctly it
3 looks like the I'm going to say purple line is your
4 project boundary. My assumption of that is that is
5 following a parcel line, is that correct or incorrect?

6 A. That's correct.

7 Q. Okay. And then the fence is pulled back
8 from that parcel line, it may be little a bit hard
9 just because of the size on here, but it looks like
10 the fenced in is pulled back in most instances off of
11 the parcel line in most areas. Do I have that
12 correct?

13 A. Yes.

14 Q. In around the middle of this map and I'm
15 referring to the one that's up on the screen, C300, in
16 the middle of the map just to the east of the
17 substation it looks like there is a bumpout, is this
18 area that is on the east side of 600 East Road, is
19 that area also a participating parcel? The one that
20 is depicted within the boundary line or the project
21 boundary.

22 A. Can you --

23 Q. It is back to where that parcel is right
24 now.

1 A. Oh, yes.

2 Q. Is that also a participating parcel?

3 A. Yes, that is a part of the project
4 boundary, yes.

5 Q. Okay. Understood. The retention ponds
6 or storm water basins, are you using that term
7 interchangeably?

8 A. Yes, I am.

9 Q. Is there any issue with leaving them in
10 place?

11 A. No, there is no issue of leaving them in
12 place.

13 Q. My question then is is it better to
14 leave them in place from your perspective or is it
15 better to remove them after the construction is done
16 from the standpoint of storm water runoff?

17 A. For storm water runoff I would -- you
18 know, I don't think they're needed -- you know, for
19 that, you know, perspective by itself, but, you know,
20 I'd recommend removing them, you know, since they're
21 not a requirement. I would remove them simply because
22 the fact that it reduces the chance of having standing
23 water, you know, sitting within the project boundary
24 project and keeping that drainage flowing natural as

1 it has before.

2 Q. Okay. So then I guess my follow-up in
3 that regard, is it better for the -- is it better for
4 runoff to leave them in place or remove them? And it
5 sounds like you're saying it's better to remove them
6 for runoff?

7 A. Yes.

8 Q. Okay.

9 MR. KEYT: That's all the questions I
10 have. Thank you.

11 MR. KAINS: Very good. Thank you,
12 Mr. Keyt.

13 Redirect, clarification from counsel.

14 MS. KENNEDY: I don't believe so, no.

15 MR. KAINS: Okay. Very good.

16 THE WITNESS: I have a question. I know
17 this is probably maybe out of the ordinary, but there
18 was a question earlier about the wind speeds for
19 panels and so forth. If I -- can I -- can I respond
20 to that or provide clarification to it.

21 MR. KAINS: Go right ahead and clarify.

22 THE WITNESS: Okay. So typically -- I
23 forget who asked the question, but the panels
24 typically are designed and constructed for a 140 mile

1 an hour wind. The -- you know, an F2, I think 75
2 percent of the -- you know, tornados wind speeds are
3 lower than that, you know, and so kind of going into
4 the previous testimony of those panels being, you
5 know, tossed around for maybe ten feet, maybe not a
6 tornado but, you know, these -- they don't fly around
7 easily, and the project would be designed for, you
8 know, the local wind speeds to make sure they would be
9 meeting local codes.

10 MR. KAINS: Thank you. Based upon
11 Mr. Christensen's testimony regarding wind speeds and
12 tornados, are there any questions from the committee
13 just based on his last bit of testimony?

14 From the public, just about tornados and wind
15 speeds?

16 Mr. Keyt.

17 MR. KEYT: I've got a couple.

18 MR. KAINS: I'm sorry?

19 MR. KEYT: I've got a few.

20 MR. KAINS: Okay.

21 **FURTHER CROSS-EXAMINATION,**

22 **QUESTIONS BY MR. ANDREW KEYT:**

23 Q. When you talk about -- when you say wind
24 speeds of 140 miles per hour are you talking about

1 straight line wind or are you talking tornado speed?

2 A. It would be -- I think it would be
3 straight line wind. I don't know if it would be
4 tornado speed, but, yeah.

5 Q. Okay. Is there a -- is there a way to
6 prevent -- and I understand it's not possible
7 necessarily to prevent it in all scenarios, but is
8 there a -- is there a methodology that can be utilized
9 to help reduce the risk to either the panels becoming
10 dislodged from the racking system?

11 A. It depends on the rack and kind of --
12 and how their design is laid out, you know, I know
13 with -- you know, they're meeting local requirements
14 for, you know, what wind speed used to be for which
15 category that wind speed is, you know, so they're --
16 you know, they're trying to make the connections
17 appropriately, you know, to design it to meet those
18 winds. You know, outside of, you know, adding
19 additional connections to it, you know -- you know,
20 these are, you know, maybe questions for the
21 manufacturer to provide, but I would say that would
22 be, you know, a possibility.

23 Q. Do you know or if you're aware does
24 someone else that might be called for the application,

1 are they aware of what the wind speeds might be in
2 this area?

3 A. That I'm not sure.

4 Q. Okay. All right.

5 MR. KEYT: No more questions.

6 MR. KAINS: Based upon the additional
7 testimony for Mr. Christensen and Mr. Keyt's
8 questions, counsel?

9 MS. KENNEDY: No. Thank you.

10 MR. KAINS: Okay. Very good. Final
11 questions for this gentleman from the Board? Very
12 good.

13 Thank you, Mr. Christensen, you may step
14 down. You're excused.

15 (Witness excused.)

16 Ms. Kennedy, a little bit of homework for
17 you, when there are questions from the public that
18 your witness cannot answer, again, if you could
19 provide answers, you know, kind of keep a running
20 total, I see you have able assistants over there and
21 lots of witnesses so, and if it's somebody who's
22 coming up later on they can address those.

23 All right. Folks, it is, 22 minutes after
24 12:00, and it's time for lunch. And we're going to be

1 in recess, give us an hour plus some time to get some
2 housekeeping stuff done. We're going to be in recess
3 until 1:45 this afternoon. And so we'll continue with
4 the applicant's case at that time.

5 This committee hearing is in recess until
6 1:45.

7 Thank you.

8 (A recess was taken at 12:23 p.m.)

9 (Resume at 1:41 p.m.)

10 MR. KAINS: All right. Let's go back on
11 the record. Good afternoon.

12 We are back resuming the public hearing on
13 Mural Energy, LLC's special use permit application for
14 a solar energy project, a solar farm, and we've had
15 three witnesses and we're going to -- it's 1:40 in the
16 afternoon, we're going to go until around 4:15. It's
17 my understanding this room has to be used a little bit
18 later in the afternoon, and about 4:15 we're going to
19 sit down and just have a big conference about when we
20 can come back and resume this public hearing. But for
21 the next two and a half hours we are going to try to
22 get through as many witnesses as possible.

23 Ms. Kennedy, are there any preliminary
24 matters that you might have before we start with

1 witnesses again?

2 MS. KENNEDY: No. Thank you.

3 MR. KAINS: Okay. Mr. Keyt, do you have
4 anything?

5 MR. KEYT: No, sir.

6 MR. KAINS: Okay. Very good.

7 Ms. Kennedy, you may call your next witness.

8 MS. KENNEDY: Thank you. I'd like to
9 call Tom Huddleston.

10 MR. KAINS: All right. Sir, if you
11 could please raise your right hand.

12 T O M H U D D L E S T O N,

13 was called as a witness on behalf of the Petitioner
14 and, having been first duly sworn, testified as
15 follows:

16 MR. KAINS: Very good. Thank you. You
17 are?

18 THE WITNESS: Thomas L. Huddleston.

19 MR. KAINS: Could you spell your last
20 name.

21 THE WITNESS: H-U-D-D-L-E-S-T-O-N.

22 MR. KAINS: Very good. Ms. Kennedy.

23

24

1 **DIRECT EXAMINATION,**

2 **QUESTIONS BY MS. COURTNEY KENNEDY:**

3 Q. Mr. Huddleston, how are you currently
4 employed?

5 A. I'm employed with Huddleston McBride
6 Drainage Land Drainage Company.

7 Q. What is your job title there?

8 A. I'm manager and owner of Huddleston
9 McBride which manages a group of land drainage
10 companies that install agricultural drain jobs.

11 Q. And how long have you served in that
12 position?

13 A. I'm a third generation, but I've owned
14 the 3 companies for 48 years.

15 Q. How many years experience in drainage
16 issues do you have generally?

17 A. Well, I've -- I've been drainage my
18 whole life in agriculture, but I've -- I worked for
19 the companies back when I was -- when I was a kid and
20 then I took over, and, again, this is my 48th year and
21 we're still very lively in business.

22 Q. And are you familiar with agriculture at
23 all?

24 A. Very much so.

1 Q. And how so?

2 A. Well, we've lived agriculture, our
3 family owns farmland. I'm very devoted to
4 agriculture. I happen to be the president of the
5 school board in my local community for over 25 years,
6 we have a very robust agricultural academic program
7 where we -- we train kids to be farmers and -- in the
8 AG industry and it's -- it's a very aggressive program
9 and it's a program that's renowned in northern
10 Illinois, so I'm very close to that.

11 Q. And are you familiar with solar farms
12 generally?

13 A. Yes, very much so.

14 Q. And have you worked on solar farms or
15 been a part of them?

16 A. We have. When solar farms first came to
17 Illinois the agricultural community wasn't necessarily
18 embracing them and we thought we had the methodology
19 to be able to -- to mitigate drainage and to -- to
20 make sure that the -- the solar farm could be
21 remediated and then stay as -- as prime farmland when
22 it was decommissioned.

23 Q. What is the largest solar farm you've
24 worked on?

1 A. 60 -- I'm working on several large ones.
2 I'm working on a 6,500 acre one right now, but I have
3 several that are well over 1,000 acres.

4 Q. And have you worked on various solar
5 farms within Illinois?

6 A. I have. I've done more community solar
7 which are 2 and 5 megawatt farms and we've done over
8 300 of those.

9 Q. And have you worked with any solar farms
10 specifically here in Vermilion County?

11 A. I have. I've done several. Matter of
12 fact, I just finished the mitigation, the reinstalling
13 of drain tile in a community solar farm in Oakwood
14 that was done for a company called Summit Energy. We
15 just finished that like two weeks ago.

16 Q. And are you familiar with Algonquin or
17 Liberty Power?

18 A. Yes, ma'am, I am.

19 Q. And how so?

20 A. We've had -- I've several conference
21 calls with them and met their team and they've sent me
22 their engineering and we've reviewed the -- their
23 project, and so we were -- we became committed to them
24 to work on their agriculture mitigation.

1 Q. When you say the project you mean the
2 Mural Energy solar project?

3 A. Yes, ma'am.

4 Q. Did you perform any investigation or
5 walk through of the proposed site for this solar farm?

6 A. Yes, ma'am. I went to the site and
7 spent a full day walking the farms. I also met with
8 the local contractor who does drain tile in the region
9 and we discussed the area drainage and I found that
10 this site is not much different than other prime
11 farmland areas within Illinois. So, yes, I'm very
12 familiar with it.

13 Q. What, if anything, can you tell me about
14 the land and drainage system here in Vermilion County?

15 A. So this -- there's -- this section of
16 land is extremely fertile, it's -- it's Illinois
17 prairie land that was converted back in the late
18 1800's by -- by settlers who broke the land and
19 installed ditches and drain tiles and farmed the farm
20 and made it what it is today. So it's -- and we would
21 rate it very highly in terms of prime farmland.

22 MR. KAINS: Ms. Kennedy, I'm going to
23 interrupt. Are you tendering him as an expert?

24 MS. KENNEDY: Yes.

1 MR. KAINS: Okay. Very good. Mr. Keyt.

2 MR. KEYT: No objection.

3 MR. KAINS: No objection. Yeah, he's
4 got vast experience and Mr. Huddleston is an expert in
5 his field so he will be treated as such and have
6 unlimited testimony.

7 Go ahead.

8 **QUESTIONS BY MS. KENNEDY:**

9 Q. Now, what, if anything, can you tell me
10 about the land proposed to be within this project?

11 A. It's rather flat land, there's not a lot
12 of sheet or surface drainage. It's predominantly
13 drained by agricultural drain tiles. So the drain
14 tiles are laid anywhere from 48 inches to -- to
15 slightly deeper, and the function of the drain tiles
16 is actually remove the saturation within the voids of
17 the soils which consume rainfall up to an inch and a
18 half before it becomes rain off -- runoff and then
19 after 72 -- 48 to 72 hours the drain tiles take it to
20 the pond in which saturation out of its soils. So
21 it's -- it's very -- it's very similar or typical to a
22 lot of agricultural land in the Midwest.

23 Q. And what is the land currently being
24 used for now?

1 A. For row crops, rotation of corn and
2 beans.

3 Q. And the same and similar for adjacent
4 properties?

5 A. Yes, ma'am.

6 Q. What is the ultimate goal of the
7 drainage system here in Illinois?

8 A. Primarily promote the -- the premium
9 value of farmland and to grow the most optimum crop.
10 To be able to get the farm operators in there early to
11 prepare seed bed and plant seed and to able to allow
12 them to come in late to do -- to harvest. So removing
13 all the saturation from the voids gives the
14 opportunity for the plant structure to grow deep
15 within the soils and to be ready during dropping
16 period where water is and to -- to grow stability for
17 the plants.

18 Q. Now, when you're commissioned to work
19 with a solar energy facility like Mural Energy what is
20 your ultimate goal?

21 A. My goal is to assess the agricultural
22 area and to remediate and mitigate the existing
23 drainage systems so that the local area will drain as
24 the existing condition and most importantly the up and

1 nonparticipating landowners will continue to drain the
2 same as they do today.

3 Q. What, if any, measures do you take in
4 the outset -- of the outset of your work on projects
5 like this?

6 A. I'm sorry, would you say it again.

7 Q. What, if any, measures do you take at
8 the outset of your work on projects like this?

9 A. On the outside?

10 Q. Yep.

11 A. We meet with the landowners, we also
12 have a drain tile investigation process that I'm going
13 to show you on my power point that we have performed
14 to be able to make sure that we have all the drain
15 tiles that are -- that are drained in the area. We
16 also meet with the surrounding landowners to make them
17 stakeholders in the process as well.

18 Q. So you just mentioned that you prepared
19 a power point presentation for today; is that correct?

20 A. Yes, ma'am, I did.

21 Q. And is that pulled up on the screen
22 here?

23 A. Yes, ma'am.

24 Q. And did you personally prepare this?

1 A. I did, yes, ma'am.

2 Q. And was it in anticipation of today's
3 hearing?

4 A. Can you flip through the slides for me
5 when I tell you to.

6 Q. Yes.

7 A. This is --

8 Q. Real quick I'm going to pause you right
9 there.

10 MS. KENNEDY: I have a hard copy exhibit
11 I can pass out if you'd like.

12 MR. KAINS: Yes. If you could, please,
13 yes. Exhibit Number 4.

14 MR. KEYT: Thank you.

15 MS. KENNEDY: You bet.

16 **QUESTIONS BY MS. KENNEDY:**

17 Q. All right. Go ahead and proceed and
18 then I'll stop you again and we'll --

19 A. Okay. Thank you. So agricultural
20 drainage through drain tile systems are extremely
21 important to the origination and to the ongoing
22 progress of Illinois farmland. These pictures were
23 taken -- if we -- I dug out of some archives from the
24 late 1800's when -- when landowners were given this

1 land through Lincoln Land grant days and they actually
2 moved in and dug ditches and laid drain tiles to turn
3 this Illinois wetland prairie into a productive
4 farmland. So we started by digging ditches and then
5 laying drain tiles off those ditches and then actually
6 putting drain tiles into the ditches and covering them
7 which created what we call covered drains which are
8 actually drain tiles. So when you drive down the road
9 and you look at Illinois farmland and as dry as it is
10 and as fertile as it is you'll notice that -- that all
11 the soils even though there are very many different
12 groups of soils all drain equally it is because of
13 something you can't see and that is the millions of
14 miles of drain tiles in Illinois that have been
15 installed and make each of the soils equal in
16 production, particularly the more hydrant soils which
17 this -- this side is made up of. Next slide, please.

18 This picture kind of shows some of the
19 existing systems. The upper left-hand corner are
20 actually the old drain tiles that we're -- we're
21 changing into some pattern systems with polyethylene
22 tile. These are some of our equipment, and just
23 recently since 1972 polyethylene tubing came into
24 effect and we've started to plow in and trench in

1 agricultural drain tile. Today we actually install
2 pattern systems which is a system we've installed in
3 the upper right-hand corner which is on 60-foot
4 center. So we predominantly today go to farms and
5 drain the farms out in pattern systems where we
6 completely cover the entire field with -- with
7 laterals and mains and submains so that the whole
8 field has an equal notion of drainage. Next slide,
9 please.

10 So obviously these systems exist in this
11 parcel of land that Liberty's going to convert into
12 solar. So we've prepared kind of a roadmap and
13 procedures for us to follow as we mitigate these drain
14 tiles.

15 Number one, we're going to prepare a detailed
16 drainage base map. So we're going to put together
17 photography and topography and soil groups into a map
18 and on that map we're going to make assumptions about
19 where there may be drain tiles. And then, secondly,
20 we're going to go to the site and we're going to
21 prepare what we call intensive perimeter survey. So
22 we're going to go all the way around the site and
23 split trench these areas and locate all the lines that
24 we consider legal mutual drains. Legal mutual drains

1 are drain tiles that travel through our site and
2 extend at nonparticipating lands of others, and by
3 Illinois Drainage Code in local ordinances we're
4 required to maintain those flows so that those local
5 landowners can maintain their benefits. Then we go
6 within the site and we do local drain tile mapping and
7 split trench and meet the landowners and we explore
8 and locate and GPS survey and stake plank coordinates
9 all the local drain tile systems. We then prepare an
10 agricultural mitigation and restoration plan where we
11 take the developer's solar plan and we overlay it on
12 our drain tile plan including all the piles, the solar
13 posts which are on like 22 foot centers and then we
14 rearrange the drain tile systems to mitigate the
15 existing condition but not in conflict with the
16 existing solar field. And then construction and
17 maintenance, once the -- we go into the site right
18 after the solar posts are all staked and we call it
19 the realtime because we do it off the same stakes that
20 they drop the posts on, so we go on the site and then
21 we completely reinstall all the drain tiles within the
22 alleyways and out of conflict with the solar posts and
23 we use a dual wall perforated polyethylene pipe which
24 is an extra heavier grade pipe than what we use when

1 we -- when we actually drain our farm, we mix tiny
2 portholes that are links that are 14 and 20 foot long
3 and that pipe is -- we can warranty for 50 years, it's
4 also a lot faster running pipe because it's -- it's
5 smoother on the inside, it's extremely durable for any
6 kind of construction equipment that may -- that may
7 disturb their pipe during the construction itself. We
8 also install breather pipes or vents at all points of
9 ingress and egress of wherever a drain tile either
10 comes into our site or leaves our site. We put a
11 six-inch riser pipe with a removal lid so if at any
12 time a landowner on either side can look down the vent
13 and be assured that the water is moving through the
14 drain tile system.

15 Okay.

16 Q. Next slide?

17 A. Yes, ma'am. So this is kind of a little
18 bit of an example. This is a smaller parcel, but this
19 is a perimeter investigation where the red lines are
20 the actual lines that are legal and mutual drains that
21 extend to the upper landowners. So the yellow stars
22 are actually landowners that depend on those drain
23 tiles, the green stars is where it actually exits our
24 property. So this gives us -- we map these out and

1 this gives us information for us to meet with these
2 landowners and verify how they're using these drain
3 tiles and also what their wishes might be within their
4 upland parcels for future drainage, you know, do they
5 think they might pattern drain, do we need to upgrade
6 the size of these drain tiles. So we try to make them
7 stakeholders within this planning process so that they
8 understand what's happening within the solar field so
9 they can continue to farm their land as they do in
10 existing times. Next slide, please.

11 We then -- this is kind of hard to see, but
12 the map on the left is an intensive survey where you
13 can see the red lines which are the mains. There are
14 also some thinner lines which are all the local
15 laterals, those consists of 3 and 4 inch, 5, 6 inch
16 lines that actually flow from the drain to the parcel
17 itself so we know exactly where those tiles are and
18 how we might need to mitigate those. Next slide,
19 please.

20 So when the solar farm's actually installed
21 the -- the yellow grid is the actual solar farm
22 itself. We reroute -- the black and white lines are
23 rerouted for the benefit of the upland landowners and
24 those are large diameter pipes that continue to move

1 flows from the up and down through our site and egress
2 into the -- the -- the outfall system itself, and then
3 the local systems we actually plow new lines in within
4 the grid to be able to -- to mitigate the local
5 systems and continue to dewater the local areas.

6 I think that's last one. Yes, ma'am.

7 Q. So you mentioned that you reached out to
8 adjacent landowners to allow them to become
9 stakeholders, does that give them an opportunity to
10 improve their current drainage on their property?

11 A. Yes, ma'am, it does. Under Illinois
12 Drainage Code an upland landowner always has the right
13 to improve its drainage to the lands of others. So an
14 upland landowner that may be -- that may be above my
15 farm, for example, can come to me and if I don't want
16 him to lay drain tile through my -- my property he can
17 get a judge to actually lay new drain tile through my
18 property parallel to non conflict with that existing
19 system. So everybody -- everybody in agriculture has
20 the right to continue to modify their drainage.

21 Q. In your opinion, based on your
22 experience even if an adjacent landowner declines to
23 upgrade their current drainage system do you believe
24 that the drainage system overall will be improved

1 based on the work that you just detailed?

2 A. Yes, ma'am. They -- a lot of these
3 drain tiles are over 100 years old and not in very
4 good condition at all. In fact, a lot of these drain
5 tiles probably would not survive solar construction so
6 that's why we go to the work of replacing these lines.
7 But replacement is completed with the material that's
8 a much faster pipe than what's existing so it gives
9 the upland landowner the comfort of knowing that he's
10 draining into a committed dedicated line that will
11 continue to take his flows or her flows.

12 Q. Are you familiar with what's known as
13 the Agricultural Impact Mediation Agreement?

14 A. Yes, ma'am, very much so.

15 Q. And what is that?

16 A. It's an agreement that the county
17 discussed with a lot of agricultural experts for a
18 long period of time. It primarily states that
19 whenever wind or solar develops in prime farmland that
20 it has to mitigate the disruption of that farm ground
21 so that the end result will be that the land is equal
22 or if not in better condition than went into that --
23 that new land use.

24 Q. And the AIMA covers or at least

1 regulates drainage issues among others; is that
2 correct?

3 A. Correct.

4 Q. And it sets out certain standards that
5 the developers or in this case Mural Energy must
6 adhere to in a construction operation and maintenance
7 of a solar energy facility?

8 A. Yes, ma'am.

9 Q. Under the AIMA what happens if drain
10 tile is struck during the construction process?

11 A. Well, to start with all the drain tile
12 is replaced with new pipe and the new pipe is put in
13 where it is out of conflict with any solar posts, out
14 of all electrical cables which are dug in, although we
15 GPS and record draw all the new drain tiles, we also
16 stake all the new drain tiles on the site so when the
17 construction crews come in they know exactly where the
18 new drain tiles are, and then the site
19 superintendant's job is to make sure that the
20 electrical trenching contractor treats those drain
21 tiles with respect and then either bores under or he
22 cuts through the property and slices that tile
23 together.

24 Q. Now, what happens if a drain tile is

1 struck let's say during the construction process but
2 it isn't discovered until the project's fully
3 operational, what happens?

4 A. Well, you know, at the very end if that
5 happens, and it has happened where a superintendent
6 may not have been there when they struck a drain tile,
7 we can still get mini-excavation equipment easily up
8 the alleyways and since we know spot on by GPS and
9 stake claim where the drain tiles are it's relatively
10 easy for us to identify the failure.

11 Q. And in that instance where a drain tile
12 needs to be replaced is that a lifetime replacement?

13 A. It is. We just go in and cut the
14 section out with stampics and we use fernco adapters
15 in the section and splice that section together. It's
16 very easy, a common repair.

17 Q. Within what time frame must the repairs
18 be completed?

19 A. So the actual drain tile system, the
20 mitigation is right after the piles are located and
21 many times it's done in phases so that the solar
22 erectors can follow behind us. So it takes probably a
23 few months to be able to mitigate a site like this.

24 Q. In your experience do you have any

1 concerns specifically related to drainage about taking
2 these acres out of row crop production and then using
3 them for a solar treatment facility?

4 A. Well, to be honest with you in the
5 beginning I did a little bit because I'm a farm
6 person, but we had a set aside program years ago where
7 farmers would pay to not plant crops and when the
8 crops were tilled after that the land was found to
9 come out in very good fertile condition. We farm our
10 farm in Illinois through the Midwest pretty hard, we
11 get in probably earlier than we need to, we harvest
12 probably a little later, we use large equipment, large
13 grain wagons, allowing the land to rest for 35 years
14 and to allow native grasses to reenergize the native
15 natural nutrients back into the soil structure, we
16 allow the roots to be able to open up their porous
17 fixtures within the soil itself. We completely
18 curtail any soil erosion on that site for 35 years so
19 we actually promote a building of new soils. Then
20 when the land comes out it will be -- it will be close
21 to pre settlement date conditions and should be ready
22 to -- to chisel and farm and grow row crop.

23 Q. And when you've performed all the work
24 that you just detailed for us and the solar farm is

1 fully decommissioned do you believe the drainage
2 system will still be improved at that time?

3 A. Yes. The drainage system will be better
4 at that time than it is when we first moved in the
5 site. It's a heavier material, it's a brand new
6 material and it's a faster material and it's located.
7 Now, the drain tiles right now as today are not GPS
8 located so we'll know where every inch is. So if a
9 farmer after decommission he wants to grid a pattern
10 drain his -- his parcel then the mains are there to do
11 it and the process should be generally typical.

12 Q. And I believe there was a question
13 earlier in this hearing about local drainage district.
14 What, if any, communications do you have with the
15 local drainage district during this process?

16 A. I deal with a lot of drainage districts,
17 in fact, deal with engineers for a lot of drainage
18 districts and I completely understand the structure of
19 a drainage district and I do not know if there's a
20 drainage district in this parcel or not, I haven't
21 been told, but if there is then they get treated with
22 the same respect as an individual mutual drain tile
23 does. The only difference is and if it's a drainage
24 district we typically provide a 40 year -- or a 40

1 foot corridor over that main drain tile because that
2 district needs to have a provision to be able to
3 upgrade that main drain should their district
4 community want to upgrade it in size.

5 MS. KENNEDY: I believe that's all I
6 have.

7 MR. KAINS: Very good. Thank you,
8 Ms. Kennedy.

9 All right. Questions for Mr. Huddleston
10 first from members of the Vermilion County Wind and
11 Solar Committee? Any questions on drainage for
12 Mr. Huddleston?

13 Okay. Mr. Fourez.

14 MR. FOUREZ: I'm just curious, I know
15 when those -- some of those mains were put in they
16 kind of followed the contour of the land.

17 THE WITNESS: Yes, sir.

18 MR. FOUREZ: When you're going in and
19 fixing it so that it doesn't interfere with these
20 solar panels you're kind of forcing it. And so with
21 the rise and fall of the land is there any -- and I
22 think you talked about it a little bit, is there any
23 issues with the equipment that they bring in and out
24 setting those solar panels running the risk of

1 crushing where you may not have quite as much cover in
2 this row as you do in that row because you're not
3 necessarily following the rise and fall of the land
4 that's going in and trying to route it around
5 obstacles?

6 THE WITNESS: So our replacement policy
7 is what's called lifekind where we actually physically
8 trench out the old met line and put a new line right
9 in the same trench. The reason we do that is we want
10 to locate and identify all the laterals that may have
11 gone into that line, so if we estimate it out we'll
12 see that lateral and we'll be able to tie it back in
13 that new main. Now, if that old main happens to go
14 right through where there's a solar post and we just
15 warp the pipe slightly out and away from that solar
16 post and then we get back on route with that existing
17 line. So most all the drain tiles are taken out of
18 the project but the drain tiles we put in are four
19 times more sturdy than the existing drain tiles we
20 take out.

21 MR. FOUREZ: So they'd be able to
22 withstand a little more ground breaks --

23 THE WITNESS: Yes.

24 MR. FOUREZ: -- or I guess some our

1 hundred year old --

2 THE WITNESS: Yes.

3 MR. FOUREZ: -- tiles?

4 THE WITNESS: Yes, sir. It's the same
5 type of material we actually use on IDOT projects. So
6 it's way overrated for what we're doing.

7 MR. KAINS: Very good. Any other
8 questions for Mr. Huddleston from members of the
9 committee?

10 Questions for Mr. Huddleston from members of
11 units of local government, including members of the
12 Vermilion County Board and members of school
13 districts?

14 Questions for Mr. Huddleston from the general
15 public?

16 Mr. Rohrscheib.

17 MR. ROHRSCHEIB: Okay. I -- I want to
18 try to understand everything that you've told us in
19 the last few minutes. It sounds mostly good except I
20 have questions. If I am -- let's start with you're
21 going to replace any of these what I would consider
22 the larger drain tiles for repair and even leave an
23 easement under like where we've got our 15's and 24
24 inch tiles so they can be mitigated or worked on

1 later? Did I understand that correct?

2 THE WITNESS: Partly. We're going to
3 replace all the large diameter drain tile with new
4 pipe that we can warranty for 50 years. It's of
5 stronger, structural integrity of what the existing
6 is. Obviously the clay drain tiles have been there
7 for 100 years and not too sturdy. Only drainage
8 districts, drainage districts are a little bit
9 special, they're a commission of individuals that
10 manage mutual drainage items like drainage ditches and
11 large diameter. I'm not sure if there's one here or
12 not.

13 MR. ROHRSCHEIB: There is.

14 THE WITNESS: But that -- that -- those
15 drainage commissions have jurisdiction over that
16 section of line. So those commissioners get together
17 and say, you know, we want to maybe lay a new line
18 parallel to our line in 10 years of 48-inch or
19 something, then we need to leave them enough land for
20 them to be able to do that. And so the typical
21 standard is 40 feet. So if they had a district main
22 then we'd leave a 40 foot corridor which is enough
23 room for them to main -- maintain the existing or
24 trench in a new one parallel to it, but I'm not sure

1 there's a drainage district on this parcel. I don't
2 know if anybody knows there is or not.

3 MR. PUZEY: There is.

4 THE WITNESS: Pardon me?

5 MR. ROHRSCHEIB: If there is a mutual
6 drain between uplands and the present owners of this
7 property then the right-of-way would not be left but
8 those tiles fully replaced --

9 THE WITNESS: Yes, sir.

10 MR. ROHRSCHEIB: -- is that correct?

11 THE WITNESS: Yes, sir. And those --
12 those tiles may not be under the jurisdiction of a
13 drainage district, they're under the jurisdiction of
14 Illinois drainage law or code which means that no one
15 can take away an upland landowners right to vent to
16 that drain. So that means that our solar project has
17 to commit to maintaining drainage to that upland
18 landowner in perpetuity. So the only way for us to do
19 that is to lay a new line that we could warranty for
20 50 years with it's laid out conflict with any of the
21 solar posts, and then there's observation wells that
22 are placed on the fence line where that ingress
23 drainage comes in so that that upland landowner
24 doesn't have to call someone up with a backhoe and dig

1 it, he can basically look down into the observation
2 well and witness its flow.

3 MR. ROHRSCHEIB: Okay. That's good.
4 You may or may not know how the costs of some of this
5 is mitigated, but my question is going to be if either
6 a drainage district or adjacent mutual drain
7 association wants to upsize their drain while you are
8 replacing who pays that? Is that cost prorated in as
9 we would do it today?

10 THE WITNESS: You know, that's going to
11 be up to the developer and who wants to be upgraded
12 itself, but in most cases with the projects I have the
13 developer has worked along with that upland landowner
14 to upgrade the size of that drainage.

15 MR. ROHRSCHEIB: But in the past that
16 has been allowed to be done?

17 THE WITNESS: Sure.

18 MR. ROHRSCHEIB: Okay. Then my -- and
19 do you on these projects as a plan -- I saw that
20 you're replacing the tile that exists, but you've been
21 in this business a long time, and if you're walking on
22 this property, say, this property needs more drainage,
23 do you develop a plan for this company that says this
24 land in order for it to be dry for your facility to

1 sit on it do you create a drainage plan for that farm
2 or just replace what is already there?

3 THE WITNESS: No, sir. In some cases we
4 add to drain tile. I can tell you that there will be
5 areas of this -- in this parcel where there will be
6 three and four and five-inch drain tiles on top of
7 each other, on top of each other again. There will be
8 so many tiles out there to where it's not feasible to
9 go in and repair every one. So what we did was we
10 just designed a new system. So we -- we go in on like
11 4 meter 60 foot centers and just plow in brand new
12 lines up the alleyways. So we'd be putting in random
13 pattern systems in certain areas which would greatly
14 improve that drainage. The local drainage is usually
15 a commitment between the developer and the local
16 landowner. That landowner needs to be assured and we
17 will that we'll be able to maintain stable soil
18 conditions within his farm for the 35 years should a
19 wetland occur on his farm because of the lack of
20 drainage or because of not adequate drainage
21 mitigation then that area would most likely get
22 wetland jurisdiction. The wetland rules and
23 regulations are always getting more stringent. No one
24 knows what they'll be in 35 years, they'll probably be

1 more stringent than they are today, but we feel rather
2 sure that either through the Department of Agriculture
3 or the Corps of Engineers that this will get
4 jurisdiction. So we need to carefully work with the
5 landowner to make sure that we maintain stable soil
6 conditions during the life of the solar farm.

7 MR. ROHRSCHEIB: Some of these
8 properties already have, not very many of them,
9 already have systems in them, will you just
10 basically -- is it your plan normally to repair those,
11 or put in the posts and then you come back and you see
12 which ones that it's on?

13 THE WITNESS: So normally what's more
14 economical is to just abandon those drain tiles and
15 lay new drain tiles up the alleyways. You know, by
16 the time our crews go in and fix 50 loop arounds and
17 repairs on drain tiles that are 100 years old it would
18 have been a lot easier for us to drop one of those
19 plows that goes 90 feet a minute and just go right up
20 through the middle. So normally those tiles are going
21 to get replaced in the near future anyway, all clay
22 drain tiles are. So it's much more economical and
23 better for the land just to put in new systems.

24 MR. ROHRSCHEIB: If -- and my last

1 question. If an upland -- present upland landowner
2 does not want to participate but you look at the plan,
3 when you do this site plan for drainage do you allow
4 for at some point in time this is a natural flow of
5 that ground, that new owners will possibly want to use
6 it and put in a facility that it needs or just what is
7 there right now?

8 THE WITNESS: Well, it's pretty
9 difficult to upgrade the size of the drain tile after
10 the solar farm.

11 MR. ROHRSCHEIB: Okay. That's why we
12 meet with them as stakeholders, yes, sir.

13 THE WITNESS: But we're going to lay the
14 drain tile to that upland landowner whether he likes
15 it or not because it's our obligation and it's State
16 law and it's the right thing to do. So we'll connect
17 his drain tiles and after that he can do whatever he
18 wants to, but if he wants to work along with the plan
19 to upgrade that system in some manner then I think
20 we'd be open to meeting with him in trying to make
21 some provision for him.

22 MR. ROHRSCHEIB: I apologize. I said it
23 wrong, but many times the present owner does not have
24 the monetary ability to put in a system, that may be

1 all they own at the time, my question kind of was --
2 and that -- but if the tile -- and we have some of
3 those right now, that if they didn't participate then
4 the drain is too strong that would go quite a bit,
5 that's my question. If you -- when you're putting it
6 do you allow extra in the system even if someone has
7 to buy the right-of-way later?

8 THE WITNESS: Sometimes we do because
9 drain tiles are different sizes. We usually bump it
10 up one size. But this material, this new pipe is so
11 velocity-wise that it will be enough, a natural native
12 upgrade to upland landowners anyway.

13 MR. ROHRSCHEIB: Thank you.

14 MR. KAINS: Thank you, Mr. Rohrscheib.
15 Any other questions from the public for
16 Mr. Huddleston?

17 Questions from counsel for Vermilion County,
18 Mr. Keyt.

19 **CROSS-EXAMINATION,**

20 **QUESTIONS BY MR. ANDREW KEYT:**

21 Q. Mr. Huddleston.

22 A. Yes, sir.

23 Q. I'm just going to have pretty quick
24 questions I think.

1 A. Yes, sir.

2 Q. If I understand your testimony
3 correctly, to the extent there may be any damage or
4 change in drainage to some neighboring property, you
5 or the developer has to go in and resolve that issue
6 for that adjacent landowner, is it a fair statement?

7 A. Yes, sir. Can I make comment on that.

8 Q. Absolutely.

9 A. It's our -- it's our intention and
10 responsibility to maintain the equal and existing
11 condition of that upland drainage and/or modify which
12 in most all cases it would be a modification.

13 Q. Okay. Understood. Regardless of when
14 the damage might occur, whether it's during
15 construction or if it's during operation --

16 A. Yes, sir.

17 Q. -- regardless, the developer has to go
18 in and resolve that issue if there is an issue to be
19 resolved; is that fair?

20 A. Absolutely.

21 Q. The project that you talked about very
22 briefly that was a 6,500 acre solar project that you
23 mentioned, where was that located?

24 A. That's located in Lee County along 39

1 and it's ongoing. Basically it has not been built
2 yet, in fact, I don't even think they have an
3 interconnection agreement yet but they've been through
4 the county and they're adding to it. It's up and down
5 39, basically from like Waterman, Illinois, up to
6 Rochelle.

7 Q. Understood.

8 A. It's large.

9 Q. Have you worked on any projects of this
10 size or larger that have been built?

11 A. Not utility scale. I'm building a
12 utility scale in Champaign County of -- I have
13 contracts to build it this summer on 1,200 acres in
14 Champaign County, but most utility scale projects are
15 waiting for either zoning or interconnection
16 agreements. But I've done a lot of community scale
17 projects. I've done well over 200 community scale.
18 And utility scale's really not too much different than
19 a smaller parcel except for it's just a lot bigger.

20 Q. Understood.

21 MR. KEYT: That's all the questions I
22 have for you. Thank you.

23 THE WITNESS: Okay. Thank you.

24 MR. KAINS: Thank you, Mr. Keyt.

1 Ms. Kennedy.

2 MS. KENNEDY: No.

3 MR. KAINS: Very good. Final questions
4 for Mr. Huddleston come from members of the committee.

5 MR. FOUREZ: I guess I have one.

6 MR. KAINS: Yes, Mr. Fourez.

7 MR. FOUREZ: Within the -- getting this
8 all setup and done do either you or the developer
9 reach out to those upland nonparticipating landowners
10 to make them aware of what's happening and what -- how
11 that's all going to work or --

12 THE WITNESS: Yes, sir. I'll arrange
13 that with developers. You know, on most projects
14 we've had like a public hearing or sometimes we've
15 invited those people to like come in like one hour
16 shifts or something to a hotel conference room or
17 something, but we sit down with the map and explain it
18 to them and have them give us input. You know,
19 it's -- it's my advantage for an upland landowner to
20 verify that the drainage that we found and that our
21 assumptions are correct. You know, they've been there
22 a lot longer than us and so their input is very
23 important to me to make sure that I mitigate their
24 drainage in the proper manner.

1 MR. FOUREZ: I just wanted to make sure
2 that -- you know, especially, this one, a lot of it's
3 down close to the drainage ditch anyway so you're kind
4 of at the bottom of the drainage.

5 THE WITNESS: Yes, sir.

6 MR. FOUREZ: I just wanted to make sure
7 those people upland had an awareness that all this was
8 happening and things were changing, where their water
9 might eventually wind up.

10 THE WITNESS: Yes, sir.

11 MR. KAINS: Very good. Any other
12 questions from members of the committee?

13 Mr. Huddleston, thank you.

14 THE WITNESS: Yes, sir. Thank you.

15 MR. KAINS: Appreciate it. You may step
16 down. And you're excused.

17 (Witness excused.)

18 MR. KAINS: Ms. Kennedy, your next
19 witness, please.

20 MS. KENNEDY: Thank you. I'd like to
21 call Jason Hellendrung.

22 J A S O N H E L L E N D R U N G,
23 was called as a witness on behalf of the Petitioner
24 and, having been first duly sworn, testified as

1 follows:

2 MR. KAINS: Very good. Would you please
3 state your name for the record.

4 THE WITNESS: It's Jason Hellendrung.

5 MR. KAINS: And spell your last name.

6 THE WITNESS: Last name is,

7 H-E-L-L-E-N-D-R-U-N-G.

8 MR. KAINS: R-U-N-G?

9 THE WITNESS: Yes.

10 MR. KAINS: Hellendrung.

11 THE WITNESS: Yep.

12 MR. KAINS: Very good. All right.

13 Ms. Kennedy, you may inquire.

14 **DIRECT EXAMINATION,**

15 **QUESTIONS BY MS. COURTNEY KENNEDY:**

16 Q. Please tell us a little bit about your
17 educational history.

18 A. Sure. I have a Bachelor's in Landscape
19 Architecture from the University of Rhode Island.
20 I've been practicing landscape architecture for about
21 28 years.

22 Q. And what licenses, degrees or
23 certifications do you have?

24 A. A degree in landscape architecture. I'm

1 a licensed landscape architect in 12 different states.

2 Q. And what is your current occupation?

3 A. I'm a Vice President at Tetra Tech and
4 in that role I lead and direct a lot of landscape
5 architecture and planning in urban design projects.

6 Q. And what business is Tetra Tech
7 primarily engaged in?

8 A. Engineering, environmental sciences and
9 so we're supporting the Mural team on this effort
10 here.

11 Q. How long have you served as a vice
12 president in planning and design at Tetra Tech?

13 A. I've been with Tetra Tech for about six
14 and a half years, and prior to joining Tetra Tech I've
15 operated in a role as a partner and vice president for
16 about 16 years.

17 MS. KENNEDY: At this time I'd like to
18 treat him as a subject matter expert.

19 MR. KAINS: Yes. Mr. Keyt.

20 MR. KEYT: No objection.

21 MR. KAINS: All right. Mr. Hellendrung
22 will be considered an expert and allowed unlimited
23 testimony.

24 Go ahead.

1 **QUESTIONS BY MS. KENNEDY:**

2 Q. Are you familiar with solar energy
3 facilities generally?

4 A. I am. I've been working with team
5 members at Tetra Tech for about the last four years on
6 about 15 different solar sites, more broadly beyond
7 solar a lot of my work has touched for the last 25
8 years so really looking at visual impact analysis, and
9 going back to late 90's I worked in the DC Metro Area
10 where I was doing work with the telecommunication
11 industry looking at visual impact. If you think of
12 the late 90's, cell towers and everybody got cell
13 phones, but at the end of that I did siting screenings
14 for cell towers, but then also worked with the DC
15 Metro area and also around the country on different
16 transportation projects on how to look at and mitigate
17 the visual impact of some of those projects.

18 Q. What is the largest scale solar project
19 that you've worked on?

20 A. Largest is a 200 megawatt solar facility
21 with an 80 megawatt battery powered storage facility
22 on about 1,700 acres.

23 Q. And where was that located?

24 A. That was in Texas, in Bexar County

1 outside of Austin.

2 Q. And are you familiar with Mural Energy,
3 LLC?

4 A. I am. I've been working with the team
5 over the last period of time and looking at some of
6 the landscape screening and buffering of the project.

7 Q. Are you familiar with the soil types
8 here in Vermilion County?

9 A. I am. I've worked in a lot of parts of
10 the country. I'd say -- I'd characterize my knowledge
11 as really understanding soils more, and so
12 understanding really their -- their soil texture,
13 composition, organic matter, and with that have
14 knowledge base that kind of helps to understand and
15 analyze soils all over. But I have -- I have worked a
16 lot in Iowa and elsewhere with a lot of states and
17 have a good understanding of the prairie soils here.

18 Q. And what, if anything, can you tell me
19 what the soil mix here in this county?

20 A. I'll echo what -- what Tom said, but, I
21 mean, great former callisia soil is very fertile,
22 that's -- a lot of it's some of the most fertile
23 agricultural in the country, why it's -- why it's been
24 developed over the last couple centuries.

1 Q. And were you commissioned by Mural
2 Energy to put together a landscaping plan?

3 A. Yes.

4 Q. And what exactly is a landscaping plan?

5 A. It's to look at -- with the solar
6 facility to look at and assess, you know, where some
7 of the facility could be most visible from different
8 areas. You'll hear a little bit about one of the
9 concerns is from the solar panels themselves, is there
10 glare that's from them, so if that's the case how we
11 mitigate that and kind of screen that so that it's not
12 getting into people's eyes. Looking at high
13 visibility areas, particularly on road corners, those
14 sites are the areas that we want to screen the
15 facility from the public. Are there other sensitive
16 cultural facilities or abutting property owners that
17 want screening. So coming up with a plan to address
18 some of those impacts.

19 Q. And in your experience what are the
20 critical factors that you take into consideration when
21 you're putting a landscape plan?

22 A. True. I think the key piece is
23 assessing where those views are coming from that you
24 want to screen and trying to establish a way to really

1 block foreground views and block a view as close as
2 possible. We were talking a little bit earlier and I
3 was saying, well, if I'm standing next to that door
4 and I've got an 8 foot high door next to me that's
5 going block all my view as opposed to trying to screen
6 something further away. If you're trying to screen
7 something a couple hundred feet away, that's going to
8 be a more difficult screen cause you've got a further,
9 you know, view cone and view angle to see that,
10 whatever that object is that you're trying to screen.
11 So really looking at that, then using material in a
12 lot of ways where you can look at vegetative screening
13 and evergreen plant material that would provide a
14 screen all year round. And then when -- I'm doing
15 more -- really more from a design philosophical
16 standpoint, trying to do something that looks a little
17 bit more natural and blends in. So here looking at
18 the agricultural landscape where you see agricultural
19 fields and you see drainage courses with plants
20 growing along it where you have hedge rows, trying to
21 do a screen that really blends in and looks like that.
22 So when we're looking at some of this screening to try
23 and make it look like it's a natural hedge row that
24 might have grown up along a fence line or that could

1 have grown up -- could have been a windbreak, you
2 know, different ways that -- like that to try to help
3 blend that into the landscape.

4 Q. And how do you take into account any
5 natural shades or shadows?

6 A. So for a solar facility kind of kept per
7 open, so we're obviously trying to absorb as much
8 solar, you know, radiance as possible, and so
9 obviously if you're on the north side of screen
10 panels, you know, the -- you're not going to have any
11 sun coming down from the north, you know, where we are
12 in the northern hemisphere. Cortical is -- is
13 southern view where you've got the strongest, but at
14 that point you're typically at the highest point in
15 the sky so you're not casting as much of a shadow.
16 You don't want vegetation that's going to cast a
17 shadow. It can get into a -- an impact from that
18 south angle in winter months where it could -- the sun
19 is lower in the sky, and then similarly, when you're
20 looking at the east and west views you gotta be
21 sensitive of that. So trying to not plant material
22 that's going to be too high, too tall, that's going to
23 screen the actual solar panels.

24 Q. Please go through the proposed

1 vegetative screening buffer for this particular
2 project.

3 A. Sure. So there is a few ladders to it.
4 One is the visual screening. What we've done is we've
5 set forward really a guideline at -- to support the
6 proposal at this scale from beyond the process and --
7 and the initial design. The idea is that the plan can
8 get refined as it goes through final design and
9 getting feedback from adjacent property owners and
10 property owners that may express interests in having
11 screening, but at least establish a screening detail
12 that can provide that screening now that people can
13 kind of see what we're looking at.

14 As we're looking at and we kind of talked a
15 little bit about the design, so we're looking at
16 something that looks natural and is blended using a
17 mix of plants, not just a single species of just a
18 real model culture hedge row but something that can
19 really look natural and a mix of larger trees with
20 some shrubs, mix in some evergreen material with some
21 deciduous materials and plants that would lose their
22 leaves in the winter, and then with that providing
23 that in some of those instances that high visibility.
24 There are a couple of layers I go to it as well with

1 the State of Illinois. The State of Illinois will
2 support the nocuous -- the farming industry has their
3 nocuous feed law where they don't -- they want
4 property owners to be responsible for weeds on their
5 site and so that they don't get onto other farm
6 property and impact them. And so with that, is we're
7 looking at using native plant material and then are
8 some of the maintenance requirements so that we're
9 responsible for any weeds that get on the site.
10 Obviously it's difficult, weed seeds can get
11 transported by birds or other animals that can
12 transport seed, but having that responsibility to kind
13 of take care of that as that were in place.

14 The other thing that the State of Illinois
15 has put in place particularly the way the solar siting
16 is looking to introduce plants that provide pollinator
17 species, and so on the solar site itself below the
18 panels and in some of the other areas is looking at a
19 mix of prairie plants. So rather than say a manicured
20 grass, using actual prairie plant as we talked a lot
21 about this morning and up until now, that can help --
22 help cover and restore the soil during the period of
23 the solar farm, and so that would be a mix of native
24 grasses, forbs and perennials that would be used from

1 a -- selected from native prairies.

2 Q. So I know you mentioned the nocuous weed
3 laws, how do you avoid nocuous weeds or other invasive
4 plants?

5 A. Well, nocuous weeds are -- are invasive
6 plants, they've been introduced, they're not native --
7 well, a lot of them are not native to the country,
8 they've been brought here and they've been imported.
9 I mean, sure, they are natural predators. So a bird
10 could eat a fruit and then they spread it through
11 their bird droppings so they get all over the place.
12 The key is not bringing in other materials. So
13 there's a lot around the construction site and make
14 sure that construction equipment is being cleaned
15 before it enters the site or ideally before it leaves
16 another site so that -- that isn't potentially getting
17 tracked onto the site. Then there's some of the
18 parameters around managing it if it is determined, so
19 using the manual -- manual removal or herbicide to
20 control it if -- if it were a -- some nocuous weeds
21 got -- got onto the site.

22 MS. KENNEDY: Is there any way we can
23 get the display to work?

24 MR. KEYT: I'll work on it.

1 MS. KENNEDY: Thank you.

2 MR. KAINS: Do you have other questions?

3 MS. KENNEDY: Yes.

4 MR. KAINS: Okay. Great. Thank you.

5

6 **QUESTIONS BY MS. KENNEDY:**

7 Q. Is your landscape plan submitted as
8 Appendix H in this application binder?

9 A. I believe so. If it's submitted, I'm
10 not sure if it's H, but I -- I think it's in there.

11 Q. Well, with this particular landscape
12 plan and buffer that you put together how many rows
13 are you recommending?

14 A. We've got a double row included, and so
15 trying to mix some lower shrubs that we've got that
16 will grow up to about 8 to 10 feet, layered with some
17 trees, so it's a little bit of depth here. The
18 buffer's about 25 feet wide adjacent to the fence row
19 and -- so it's a double row where trees and shrubs
20 kind of stagger back and forth.

21 Q. And what about spacing?

22 A. We've -- what we've done is created for
23 this a module that could be used and replicated in the
24 areas where screening were to be put in place and the

1 spacing is about 10 to 12 feet between plants, we're
2 trying to do it in a natural way, so it staggers a
3 little bit, but with that it's about every 10 feet or
4 so is a couple of plants.

5 Q. And how tall will this vegetative buffer
6 get?

7 A. So we've -- we've created just an
8 initial plant list. The shrubs that we've identified
9 are all in the 8 to 10 foot range and the trees are in
10 the 20 to 25 foot range.

11 Q. What type of trees or shrubbery do you
12 utilize to accomplish the goals in landscape plans?

13 A. Trying to do native plants and, you
14 know, in an instance like this where we're trying to
15 provide some screening, trying to integrate in some --
16 you know, a good portion of evergreen plants.

17 Q. Where exactly are you proposing the
18 vegetative screening to go with respect to this
19 project?

20 A. First would be some of the areas that
21 were identified where there was some glare, so there's
22 a few instances like that. Then along the high
23 visibility quarters where there is some of the solar
24 coming up and abutting it. So I was just looking

1 through -- you know, we'll kind on rest on some of the
2 quarry area, North 400 East Road, East 900 North Road,
3 couple of the areas where, you know, some of the
4 solar -- the parcels that are participating are right
5 up next to public rights-of-ways. East side -- East
6 800 North Road, North 600 East Road, couple of the
7 areas so, and -- and with that the idea also is that
8 while we're pretty early in the plans here to support
9 the permitting package, but this could get refined as
10 we move forward, but we'd also be able to go along
11 with some of the existing vegetation. Some of these
12 areas, you know, they have drainage, you know, ditches
13 along the road that have some vegetation there that do
14 already provide pretty good screening and so we could
15 supplement that.

16 Q. What, if anything, do you do if an
17 adjacent landowner requested different types of plant
18 and seed mix?

19 A. We could make an adjustment with that,
20 we often do that, it is through the process of working
21 with adjacent property owners and trying to make some
22 modifications to it.

23 Q. And so would you be willing to work with
24 those adjacent landowners on the screen or buffering

1 requirement?

2 A. Yeah, absolutely. This is a preliminary
3 guideline and we will -- could -- you know, this is
4 just really to provide a sample that would be utilized
5 moving forward. It could be expanded. One of the
6 items that we've talked about is where right near the
7 University of Illinois, great agricultural programs,
8 landscape and architect program, they published a lot
9 of different lists for the State of Illinois of great
10 native plants, great pollinator species that could be
11 used at any (unintelligible) that we've built.

12 Q. Under the Vermilion County Ordinance
13 regulating commerce solar energy facilities this
14 community could set additional landscape or screening
15 requirements. To the best of your knowledge based on
16 the communications that you've had with the applicant
17 in this case is the applicant willing to consider
18 those and adjust those screening requirements?

19 A. As far as I understand, yes.

20 Q. And you've prepared vegetative plans
21 with this project area too; is that right?

22 A. Yes.

23 Q. And where specifically would this
24 vegetation plant be installed?

1 A. Well, I think that encompassed all of it
2 and I touched a little bit about some of the planting
3 below the panels themselves and so below the panels
4 would be the prairie grasses, and so introducing some
5 of that below the panels.

6 Q. Based on your experience what, if any,
7 impacts to drainage will this proposed plan have?

8 A. We -- we talked a little bit some of the
9 storm water and -- and drainage earlier. It will
10 improve it. You know, looking at some of the
11 hydrologic analysis, you know, while a cropland is
12 fallow it's going to have more runoff than the prairie
13 plants that will be there, you know, it will be deeper
14 in terms of the soil, it will be more comprehensive
15 coverage of the ground and will -- you know, we were
16 talking a little bit about that runoff probably from
17 the farmland is probably in the range of about 50
18 percent, looking at native plant materials that's
19 going to retain more like 70 to 80 percent. So it's
20 going to retain more of that storm water right on the
21 site just based on the density of the -- of the
22 vegetation.

23 Q. What about the impact of the storm water
24 runoff?

1 A. It will -- it will absorb it, it's going
2 to let -- less of the storm water will be running off
3 of the site with the vegetation.

4 Q. How deep can these roots grow with the
5 plant mix?

6 A. It's variable by species, but, you know,
7 some of the old historic prairie plants, many of them,
8 you know, are in the range of 3 feet, but some of the
9 prairie plants can get down, you know, 7, 8 feet, you
10 know, if they're there maturing for a long time which
11 is I think when -- when some of this land was
12 originally turned, the agricultural land was what
13 found was some of these plants had been growing for
14 centuries and really deep roots.

15 Q. And did you also ask to be prepared a
16 weed management plan for this project?

17 A. Yes.

18 Q. And can you tell us a little bit about
19 that plan.

20 A. Sure. Touched on a couple of those
21 items, but one would be making sure that any
22 reconstruction equipment on site is clean so that
23 they're not tracking on any soil that could be in
24 treads, that's bringing potentially soil with weed

1 seed on to the site. The other would be if there were
2 weed seeds on the site where some weeds could start
3 growing, to make sure that it's managed and within
4 that management it would be to make sure it's removed
5 either manually or with herbicide.

6 MS. KENNEDY: I believe that's all I
7 have.

8 MR. KAINS: Very good. Thank you,
9 Ms. Kennedy.

10 Questions for Mr. Hellendrung about landscape
11 architecture and his weed management plan, etc., first
12 from the members of the Vermilion County Wind and
13 Solar Committee?

14 MR. PUZEY: Do you have a map?

15 THE WITNESS: If Courtney can bring it
16 up.

17 MR. KEYT: I've notified them to get us
18 an IT person to look at it.

19 MS. KENNEDY: I know it's Appendix H and
20 the map that I believe shows it is L05.

21 MR. PUZEY: That doesn't tell me where
22 it's going to be though.

23 THE WITNESS: You do have the plan and
24 the section.

1 MR. PUZEY: That tells me how wide it's
2 going to be and how tall it's going to be, that
3 doesn't tell me where it's going to be.

4 THE WITNESS: So we -- we have not
5 included a plan yet with the preliminary -- with the
6 idea that during the final design locations are going
7 to be refined based on getting feedback from property
8 owners -- abutting property owners where -- where it's
9 desired. But this was to establish in the preliminary
10 design the guideline for what the screening would
11 include.

12 MR. PUZEY: Okay.

13 MR. KAINS: Any other members of the
14 committee?

15 Mr. Fourez.

16 MR. FOUREZ: I'm trying to visualize how
17 this all fits together. As I understand it then, and
18 I thought I heard you say 25 feet maybe in width and
19 that is outside the fence, and, for lack of better
20 term intrudes on the setback where that screening is
21 going to go, am I right?

22 THE WITNESS: It -- that's where we've
23 set it up now. A little bit of the discussion we're
24 even having was based on feedback with some of the

1 property owners. Now, some of that setback, depending
2 upon how wide it is or adjacent property owners, that
3 could be continued to be farmed and they may not want
4 it, but we're even discussing and saying based on
5 where property lines are that screening could be in
6 different areas to screen the views that are, you
7 know, requested.

8 MR. FOUREZ: Okay. And another
9 question, as far as when those shelter belts or
10 whatever you want to call them get planted, is
11 groundcover part of that process?

12 THE WITNESS: It is.

13 MR. FOUREZ: And what kind of plan do
14 you have to keep in a 25 foot wide strip the
15 underbrush down? And the reason I'm asking about
16 that, I've got windbreaks on different places on my
17 farm and I'm continually fighting the mulberry and you
18 might want to get those cleaned out or they'll just
19 take over. I just want to know what kind of plan
20 there was to keep that underbrush down and those --

21 THE WITNESS: That -- that is on the --
22 that is on the Illinois nocuous weed list. The plan
23 is -- so the maintenance since a lot of these areas
24 have the same prairie planting it's setup to have

1 maintenance as needed, it could be once or twice a
2 year to mow and get under there. Part of the
3 requirements from the State is to not conflict with
4 monarch butterfly season as part the pomareas --
5 pomarea species, so I think that that is after
6 November 1st and up until a date in the spring, so it
7 would be in the nongrowing season, but the idea is,
8 yes, there is -- that could be mowed to help control
9 that.

10 MR. FOUREZ: Okay.

11 MR. KAINS: Mr. Puzey.

12 MR. PUZEY: Yes. In regards to nocuous
13 weeds, I think you touched on it a little bit, if a
14 weed were to appear in some time in the 35 years how
15 do you take care of that? You're saying you would use
16 herbicides?

17 THE WITNESS: Could be -- could be
18 manual, could be herbicide, whatever would be needed
19 to help take care of it.

20 MR. PUZEY: And I guarantee the winds
21 will carry it.

22 THE WITNESS: Oh, yeah.

23 MR. PUZEY: And the birds.

24 THE WITNESS: Yeah. It -- you know, in

1 looking at it understand what the State from a policy
2 standpoint wants to do with it, but whether it's
3 windblown seed or seed that's being transported by
4 birds --

5 MR. PUZEY: You're not going to just let
6 it grow?

7 THE WITNESS: Absolutely, yep.

8 MR. PUZEY: So that's the question.

9 THE WITNESS: Yep. So that would be the
10 requirements, they are to -- to make the effort to
11 clear it, and -- and I think within the State law it
12 also says if a property has gotten weeds disbursed,
13 you know, that's part of the plan is that that needs
14 to be cleaned up by the owner, and if they can
15 demonstrate that it came from the site, I'm not sure
16 how you would demonstrate that, but that's what's
17 within the State law from that same reason, wind
18 transported seed or a seed transport by either birds
19 or it could, you know, you've got squirrels or things
20 where you've got seed that can get stuck on, you know,
21 fur.

22 MR. KAINS: All right. Oh, you have one
23 more?

24 MR. PUZEY: One more.

1 MR. KAINS: Oh, absolutely, Mr. Puzey,
2 you can have a many questions as you want. You're a
3 big part of this committee.

4 MR. PUZEY: Last one. Regarding I'll
5 call it replacements, if the barrier has shrubs and
6 trees and so forth that will die, probably every year
7 you'll have something that will die, what about
8 maintenance?

9 THE WITNESS: Typically -- from the
10 design standpoint typically we warranty plants for a
11 year and so if within a -- within a warranty it's a
12 one year period if any plants have died you'll replace
13 them. I think if there are -- there are other
14 screening beyond that, cause that's just the typical
15 warranty period, I think that would -- that could come
16 down to an agreement with I think the property owner.

17 MR. PUZEY: That's a warranty to who?

18 THE WITNESS: Well, typically an owner
19 will warranty when they're purchasing a bid that
20 they'll warranty a landscape contractor. It's
21 typically a one year warranty. You can put in longer.
22 There's a cost with it, but it -- it kind of comes
23 down -- but typically within industry it's usually a
24 one year warranty of plants. If a plant hasn't

1 been -- hasn't survived, it has to get replaced by the
2 original contractor.

3 MR. PUZEY: What happens two -- two or
4 three years when that plant dies?

5 THE WITNESS: Well, I think that's a
6 discussion with the owner, you know, do they want to
7 enter an agreement to replace that. I think part of
8 the discussion too is it's a pretty dense planting
9 that we're introducing within the buffer zone so they
10 should start to fill in and, you know, some -- ideally
11 some of these plants are going to -- you know, there
12 are junipers in there, that's kind of what you see
13 from some of these hedge rows, theoretically they
14 should start seeding and start filling in some of
15 these areas and help with that screening as well.

16 MR. ELMORE: Is it possible to request a
17 color one, cause ours aren't -- or at least mine
18 aren't color coded. It does not look like that. Mine
19 is black and white.

20 MR. KEYT: We can get a copy.

21 MR. ELMORE: It's hard to tell where
22 they're at in place.

23 MR. KAINS: Ms. Kennedy, do you have the
24 technology all set up to continue with his

1 presentation?

2 MS. KENNEDY: Yes. If you wouldn't
3 mind, if I could jump in with a few --

4 MR. KAINS: No, I think that would be
5 very good. I'm glad we got it going.

6 Thank you, Mr. Keyt.

7 Go ahead with questions or presentation of
8 this witness.

9 **QUESTIONS BY MS. KENNEDY:**

10 Q. Mr. Hellendrung, can you come over here
11 to the screen, I'd like you to walk through, you know,
12 where you're proposing the screening is. Feel free to
13 take the mic and walk everyone through it.

14 A. Sure. You know, as I was -- as I was
15 noting, the plan isn't calling out specific areas for
16 screening right now, it's -- we've established the
17 guideline. As we go through the final design there's
18 a basis of design so that it's to introduce the
19 screening as we receive feedback on where it needs to
20 be. But, you know, I was kind of pointing out that
21 North 400 East Road, you know, there's the solar
22 facility up to it with the setback further away from
23 North -- 900 North Road and it really just kind of
24 gets in to some of those areas, where are the project

1 facility's directly applies. You know, here at North
2 600 East Road got facilities right up against it. So
3 identifying some of those areas and those would be
4 probably the priority areas, and also looking at what
5 existing vegetation is out there to confirm what can
6 be utilized and build off of.

7 Q. And, again, you touched on this briefly,
8 but why are you recommending screening just in these
9 areas and not around the project as a whole?

10 A. There's existing vegetation in certain
11 areas, there's some water courses that goes through,
12 they're vegetative, they just may not be as -- they
13 could -- they might not have the project on roads and
14 the people that would see it could be 1,000 and 2,000,
15 3,000 feet away. So it just -- you're going to see it
16 that far in the distance and it really isn't going to
17 have a large impact.

18 Q. So is it a fair statement that these
19 areas up here or this map are the most highly impacted
20 areas, so to speak?

21 A. The most visible.

22 Q. Okay. What is depicted on this map
23 that's labeled L2?

24 A. This is showing areas for where there's

1 mix of seed mix under the panels, that's in the green,
2 maybe two feet farther is a lighter patch for areas
3 outside of the panels along the perimeters that
4 would -- with -- within the -- the specifications for
5 the plantings. Under the panels is to use prairie
6 plants that are only up to about 3 feet height because
7 they're grown under the panels. In the other areas
8 it's a more natural prairie planting, not with the
9 restrictions to stay with under -- stay under three
10 feet. So two different seed mixes for what's going to
11 be used to revegetate the land. And then in green
12 it's kind of proposed vegetative screening, so like --
13 like I was saying, you know, North 400 East Road, main
14 road visibility for cars and traffic could be a later
15 plan, we'll get into the details on that, but provide
16 some of the screening in the areas like that where
17 there would be the most visibility of the -- of the
18 solar.

19 MR. PUZEY: The dark green is the
20 screen?

21 THE WITNESS: Yes.

22 MR. PUZEY: East side of that part of
23 the project?

24 THE WITNESS: Yes.

1 MR. PUZEY: Okay. Next one.

2 THE WITNESS: So similar here is their
3 kind of proposed interconnection point so there would
4 be a lot of utility structure there, screening for
5 that. Again, prioritizing the area that had the most
6 visibility from some of the main roads. And, again,
7 the same. See where it's showing up.

8 **QUESTIONS BY MS. KENNEDY:**

9 Q. And I'm directing your attention to the
10 map labeled L5. What, if anything, can you tell me
11 about what's depicted on this.

12 A. So this is -- this is a proposed
13 planting module. We did a module which is a 100 foot
14 sample because it's 1,400 acres so it's a very large
15 area at this scale developing plants. What we
16 typically do on some of the solar site is create a
17 module that can be replicated throughout and create it
18 and what we're seeing, this is a planned area, this is
19 a section showing mix of evergreen material with some
20 specific materials, that's evergreen trees mixed in,
21 some evergreen shrubs mixed in with some trees
22 throughout is the idea of that kind of staggering
23 layering planting to create that kind of hedge buffer.

24 Q. So that top image here, is that image

1 what the proposed screening would look like?

2 A. Yes. Yep. So that's an elevation or
3 section.

4 Q. What is this bottom image?

5 A. That's a plant image. So you can see
6 this is about 100 foot and, you know, within the 20
7 foot, 25 foot wide buffer zone and within the 100 foot
8 long module that could get replicated, you know, 2 to
9 4 and 6, 8, 10, 12 plants in that 100 foot zone. So
10 about -- as I was kind of saying, about 10 feet on the
11 center a mix of shrubs and trees, you know, there is 5
12 shrubs within -- or 5 evergreen trees through this
13 zone, a couple of evergreen shrubs in this zone mixed
14 in with some of this deciduous material to show that
15 planting strip.

16 MS. KENNEDY: I have nothing further.

17 MR. PUZEY: Move back up to L3.

18 MS. KENNEDY: You bet.

19 MR. PUZEY: So there's no border on 680
20 East Road?

21 THE WITNESS: We haven't included one,
22 no.

23 MR. PUZEY: Why would you not put it
24 there? You've got one at 400. It's the same kind of

1 road.

2 THE WITNESS: Hadn't been discussed, but
3 that's something that could get added.

4 MR. PUZEY: Okay. Can you back up over
5 to L2 just to confirm that it's on there, 400 Road.
6 Yeah. We need to talk about that.

7 MR. KAINS: Are there any questions for
8 Mr. Hellendrung from -- any additional questions from
9 members of the Vermilion County Wind and Solar
10 Committee?

11 Are you going to move to admit this power
12 point as an exhibit or no?

13 MS. KENNEDY: This is actually pulled
14 out from his report that's already included in the
15 application packet.

16 MR. KAINS: In the application so it's
17 Exhibit 1?

18 MS. KENNEDY: But as a housekeeping
19 matter, I don't think I admitted Mr. Huddleston's
20 power point presentation.

21 THE COURT: Mr. Keyt.

22 MR. KEYT: If I could make a suggestion.
23 I think the maps that are listed here are in the
24 application binder but are not in color, and so we

1 need them in color. Cause I just looked at mine and
2 mine does not have it in color. And so it doesn't --
3 you can't tell what the vegetation buffer is.

4 MR. ELMORE: You can't see anything.

5 MR. KEYT: That's what mine looks like.

6 MR. KAINS: All right. Here's what
7 we're going to do, we're go to just hold onto
8 Mr. Hellendrung's presentation until you can have it
9 in color. We would like copies for Mr. Keyt and the
10 six -- we have five board members here but one who is
11 not here but he is going to participate, he's going to
12 read this whole transcript from today. So one for
13 Mr. Keyt and one for each of the six board members so
14 we'll need seven colored ones and then I guess --
15 well, one for Mr. Keyt will be the one that will be
16 marked as an exhibit, but we take that up next time.

17 MS. KENNEDY: Okay.

18 MR. KAINS: Okay. With respect to the
19 issue of Mr. Huddleston's power point, and I know
20 we're right in the middle of something but while it's
21 fresh in our minds let's do it. Mr Keyt, do you have
22 any objection to Mr. Huddleston's power point coming
23 in?

24 MR. KEYT: No, sir.

1 MR. KAINS: And that was Exhibit 4?

2 MS. KENNEDY: Yes.

3 MR. KAINS: Yes. Okay. Exhibit 4 is
4 in.

5 All right. Now, we've got the housekeeping
6 done.

7 Questions now for Mr. Hellendrung from
8 members of units of local government, including
9 Vermilion County Board members and members of local
10 school districts?

11 Questions for Mr. "Huddleston" the landscape
12 architect from the public?

13 Mr. Puzey, go right ahead, sir.

14 MR. MARK PUZEY: Thank you. I've got a
15 couple questions. You said that the plant selection
16 is not finalized but would be made of native plants
17 and possibly tweaked at the request of adjacent
18 landowners.

19 THE WITNESS: And compliance zone.

20 MR. MARK PUZEY: Okay. When do you
21 expect that would take place between today and a
22 proposed start should this project come to fruition
23 come spring of 26?

24 THE WITNESS: I think it would as it

1 would coincide with the final design and review then,
2 went through that and I think feedback received from
3 adjacent property owners.

4 MR. MARK PUZEY: What -- when you said
5 you were going to plant perhaps two rows, a row of
6 shrubs and a row of trees with final mature life of 8
7 to 10 foot and 25 foot prospectively, what plant size
8 are you starting with?

9 THE WITNESS: We haven't specified a
10 plant size yet. We've talked -- generally my
11 philosophy in planting is using a little bit smaller
12 plant material. I've kind of been doing this for
13 probably the last 10 years, getting the feedback from
14 one client and they use this based on really
15 directions from the National Park Service where kind
16 of the -- just stepping back for a second they plant
17 bigger plant material now, bigger trees, bigger shrubs
18 and it would block more and screen more now. Really
19 the directive from the National Park Service is put in
20 slightly smaller plant material and the reason being,
21 it's going to readjust and acclimatize to the site
22 more quickly and it will start growing. So you could
23 in -- and the idea would be you could go in and put in
24 a 4 inch caliper tree or a 12 or 14 foot height

1 evergreen tree and it might just sit there cause it
2 might be stunned, might be shocked for a few years
3 whereas, you could do something a little bit smaller,
4 so a cypress tree usually about 1 and a half to 2 inch
5 caliper, evergreen tree is 6 to 8 foot height, they'll
6 get planted, they'll get, you know, adjusted,
7 acclimated to the site and start growing in the next
8 growing season.

9 MR. MARK PUZEY: So if you were to plant
10 plants like that how long until that screen becomes
11 effective at blocking the view? How long do we --
12 does somebody have to look at -- through -- can they
13 through that to see the solar panel?

14 THE WITNESS: It would probably be --
15 some of the trees that we're looking at are putting on
16 probably in the range about 2 feet a year. So if it's
17 going in an evergreen green tree at say 8 foot would
18 be pushing probably 14 feet height in 3 years and then
19 getting some spread on it, a 2 inch caliper tree, a
20 cypress tree, so that's a stem with it's canopy, it
21 similarly would be starting to put on 2 to 3 inches,
22 and shrubs, if they're growing in probably more like 3
23 foot height, going to grow a little bit more quickly,
24 you know, shrubs just depending upon what you're

1 thinking, but what we would select would be and have
2 selected are faster growing, they're going to be
3 putting in and getting up into that range of 6 to 8
4 feet in probably 2 to 3 years as well.

5 MR. MARK PUZEY: You said the area in
6 that 25 foot wide corridor of the screening, that the
7 groundcover aside from the trees to shrubs is going to
8 be the same prairie grass that's under, so it may be
9 mowed it may not be depending on what is planted.

10 THE WITNESS: It would be getting mowed
11 I think annually to help control things like that, you
12 know, once growing in, and so you would have other
13 woody vegetation that would start to fill in. So
14 within the parameters it says once a year or more if
15 needed, I don't think you would need or want more than
16 one per year for the material that you've got in
17 there, so I think one a year would be good.

18 MR. MARK PUZEY: Is there a plan in
19 place when these plants are planted new how often are
20 they going to get watered? How often is somebody
21 physically going to be caring for them, and I know you
22 kind of eluded to the fact that there may be a one
23 year warranty and all that --

24 THE WITNESS: Yeah.

1 MR. MARK PUZEY: -- after that it's up
2 to the owners, and I assume you mean Liberty Power is
3 the owners in this case?

4 THE WITNESS: Yeah.

5 MR. MARK PUZEY: I've seen in several
6 other solar projects in East Central Illinois they
7 plant whatever plants they've chosen and within two to
8 three years three quarters of it is dead, gone. Does
9 Liberty Power have a plan to replace those plants
10 regularly such that we don't end up with a situation
11 where everything comes in and gets planted and then
12 people walk away from it and it's not cared for?

13 THE WITNESS: So the initial -- the way
14 we -- the way we structure it is within that one year
15 warranty the contractor's got to guarantee it or they
16 replace it. So if they aren't watering it,
17 maintaining properly during that first year it may not
18 survive, that's on them to replace. Beyond that,
19 that -- that really kind of gets down to ownership and
20 really the agreement of a commitment to replace beyond
21 that.

22 MR. MARK PUZEY: Is there a way someone
23 could find that out?

24 MS. KENNEDY: Yeah. I mean, I have the

1 answer now.

2 MR. KAINS: If you just go ahead and
3 make an offer of proof and just fairly simply just
4 answer his question.

5 MS. KENNEDY: In speaking with the
6 company representative they have a monthly maintenance
7 to make sure they're staying watered.

8 MR. MARK PUZEY: And then that takes
9 place through the life of the project?

10 MS. KENNEDY: Yes.

11 MR. MARK PUZEY: I think that's all I
12 have. Thank you.

13 MR. KAINS: Very good. Thank you,
14 Mr. Puzey.

15 When you woke up this morning, Ms. Kennedy,
16 you didn't think you would be a witness.

17 All right. Any other questions for
18 Mr. Hellendrung from the public? Very good.

19 Questions for this witness from counsel for
20 Vermilion County, Mr. Keyt.

21 MR. KEYT: Hello, sir. I've got a
22 couple -- few questions.

23 **CROSS-EXAMINATION,**

24 **QUESTIONS BY MR. ANDREW KEYT:**

1 Q. So do you have any modeling of what
2 the -- computer modeling that would show what the
3 buffer will look like in stages, for example, at
4 planting 2 years, 5 years, 10 years, 20 years?

5 A. I don't think modeling was done.

6 Q. Can you provide -- can you do that?

7 A. That could be done.

8 Q. Okay. The -- that may -- that may help
9 the committee and the public, frankly, to -- to see
10 what it looks like so that everyone understands what
11 it is and if there needs to be some adjustment to it,
12 cause it's hard to picture it as -- you know, from an
13 aerial sort of depiction.

14 A. Yep.

15 Q. The -- I think this question was -- was
16 answered, it sounds like there's monthly inspections
17 that would take place for the project?

18 A. Uh-huh.

19 Q. Do you know what the monthly inspections
20 would entail at least as to the landscaping portion?

21 A. I do not. I'm not -- I'm not on the --
22 on the operation side. I think that could be
23 submitted and could get an answer to you for that.

24 Q. Do you know the size of the trees that

1 would be planted at the time of planting? And you may
2 have said this but I missed it.

3 A. So we didn't specify it in the
4 guidelines, you know, for the preliminary design right
5 now. I would -- I would aim for in the range of
6 evergreen trees 6 to 8 foot height, deciduous trees 1
7 and a half to 2 inch caliper and that's kind of what I
8 feel is a -- is a -- kind of a sweet spot for
9 something that's going to get in there, it's got a
10 little bit of size to it but it's going to start
11 growing and adjust back to that site quickly and start
12 growing.

13 Q. Okay. And then in terms of the nocuous
14 weed, the listing of nocuous weeds in Illinois, I
15 understand there is a listing of them that is
16 maintained from time to time and sometimes updated, do
17 you know if waterhemp is listed on that nocuous weed?

18 THE WITNESS: What is it?

19 MR. KEYT: I don't know that I could
20 give you the scientific name for it. Well, I know I
21 can't give you the scientific name.

22 THE WITNESS: I happen to have a list,
23 let me see. I am not seeing it, but that's not to say
24 it hasn't been added, and with kind of common names

1 you can get -- typically within -- within the industry
2 we usually use Latin names, so that there's no
3 confusion over what it is, because common names can --
4 can get regional and it could go and have different
5 names for something locally.

6 Q. Understood. My science teacher said I
7 should stick to sports so I'll just stick to that.

8 But in terms of any weeds that might to be
9 managed that may not be on the noxious weed list, is
10 there a way or method to do that as well?

11 A. Oh, if there's something that you wanted
12 to be added could I think raise it and present it to
13 the ownership team and can evaluate that.

14 Q. Okay. In terms of the maintenance of
15 the living buffer -- this might be a better question
16 for the developer -- in terms of the maintenance for
17 the living buffer, what will likely require is updates
18 to the county about those inspections that have taken
19 place, my question to you then is how would you be
20 able -- or what would be the best method to provide
21 that information to the county? The question -- I
22 mean, the real question being would it be a monthly
23 report, would it be a narrative report or is there
24 some other type of report that you would suggest as

1 the landscape person?

2 A. I would suggest probably more like an
3 annual report if there is a reporting. I mean,
4 monthly report would probably be more frequent than
5 would be useful, but if you did an annual report and,
6 you know, if there was -- I mean, you cut out an area
7 where -- you know, say an area that you had plants die
8 and wanted to replace it --

9 Q. Sure.

10 A. -- you know, that would -- that would I
11 think probably be a better way to do it.

12 Q. Understood. Okay. Appreciate your
13 time. That's all the questions I have.

14 MR. KAINS: Thank you, Mr. Keyt.

15 Redirect, counsel.

16 MS. KENNEDY: None.

17 MR. KAINS: All right. Any final
18 questions for the witness come from members of the
19 Vermilion County Wind and Solar Committee, gentlemen.
20 Very good.

21 Thank you, Mr. Hellendrung. Appreciate your
22 time this afternoon.

23 (Witness excused.)

24 MR. KAINS: All right. We've been at it

1 for almost an hour and half, we're going to take a
2 quick break. It is 3:07, let's come back at 3:15,
3 that's about an 8 minute break. Let Jamie rest her
4 fingers and her mind.

5 Thank you.

6 (A recess was taken at 3:08 p.m.)

7 (Resume at 3:23 p.m.)

8 THE COURT: All right. Let's -- let's
9 go back on the record.

10 All right. We have heard from five
11 witnesses. The applicant for a special use permit
12 Mural -- is it Mural Electric or Mural --

13 MS. KENNEDY: Mural Energy.

14 MR. KAINS: Mural Energy has presented
15 five witnesses and, Ms. Kennedy, you're thinking four,
16 five more?

17 MS. KENNEDY: Yes.

18 MR. KAINS: Okay. Very good. You may
19 call your next witness.

20 MS. KENNEDY: Thank you. I'd like to
21 call Andrew Timmis.

22 MR. KAINS: Good afternoon, sir.

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A N D R E W T I M M I S,

was called as a witness on behalf of the Petitioner and, having been first duly sworn, testified as follows:

MR. KAINS: Very good, sir. Now, if I can find my pen I'll ask your name and how to spell it.

THE WITNESS: Sure thing.

MR. KAINS: Okay. Your last name, sir.

THE WITNESS: Timmis, T-I-M-M-I-S.

MR. KAINS: All right. Very good, Mr. Timmis. Thank you.

Ms. Kennedy, you may inquire.

MS. KENNEDY: Thank you.

**DIRECT EXAMINATION,
QUESTIONS BY MS. COURTNEY KENNEDY:**

Q. Please tell us a little bit about your educational history.

A. Yes. I got my bachelor's degree at State University of New York's Environmental Science and Forestry College or SUNY-Esf, very long name, and I got my master's degree at the University of Rhode Island.

Q. What did you get your master's degree

1 in?

2 A. I got my master's degree in Wetlands,
3 Watershed and Ecosystems Sciences.

4 Q. And aside from your bachelor's degree
5 and master's degree do you hold any other
6 certifications or licenses?

7 A. No.

8 Q. How are you presently employed?

9 A. I am employed with Tetra Tech
10 specifically the Rochester Office.

11 Q. And what business is Tetra Tech engaged
12 in?

13 A. Environmental consulting, engineering or
14 other sciences.

15 Q. And what job title do you have at Tetra
16 Tech?

17 A. I'm referred to as the biologist or
18 glare analyst, two different hats for -- just as my
19 work evolved.

20 Q. How long have you worked in that
21 capacity?

22 A. I've worked with Tetra Tech for over
23 five years now.

24 Q. And do you have any other related

1 experience?

2 A. No.

3 Q. What are your job duties as a biologist
4 of glare analysis -- analyst, excuse me?

5 A. A lot of the times it's my usual report
6 is wetland delineations for site's preliminary work,
7 phase one inspections or doing glare analyses for
8 various solar farms or rooftop projects.

9 Q. Okay. And so is it a fair question
10 you're familiar with solar farms generally?

11 A. Yes.

12 Q. And what type of work do you perform for
13 solar farms?

14 A. I generally do a glare analyses which is
15 modeling the entire array area finding nearby
16 receptors, either local adjacent properties, roadways
17 or for a lot of times for Federal Aviation
18 Administration or FAA guidance.

19 Q. What is the largest scale solar farm
20 that you performed a glare analysis for?

21 A. I'm not entirely sure of the mega
22 wattage of it would be but I've done 7,000 acres or
23 6,000 acres are my largest to date.

24 Q. And where was that project situated?

1 A. I want to say Midwest. I can't say the
2 specific state at the top of my head. I want to say
3 it was Ohio.

4 Q. Are you familiar with Mural Energy, LLC?

5 A. Yes.

6 Q. How so?

7 A. I am hired under them for specifically
8 the Mural project's glare analysis.

9 Q. And you're hired through your employer
10 Tetra Tech?

11 A. Yes.

12 Q. Are you familiar with the proposed solar
13 project?

14 A. Yes.

15 Q. What materials, if any, have you
16 reviewed prior to today's hearing?

17 A. I've reviewed the design plan, the 30
18 percent design plan, viewed a provided aerial imagery
19 of the -- where the layout would be and the
20 specifications for the panels themselves.

21 MR. KAINS: Ms. Kennedy, may I inquire
22 of your witness?

23 MS. KENNEDY: Absolutely.

24 MR. KAINS: Mr. Timmis, how many solar

1 projects have you conducted glare analyses on?

2 THE WITNESS: I would say over 100.

3 MR. KAINS: Are they all commercial?

4 THE WITNESS: Yes. They're either --
5 yeah, I would say they're all commercial, some smaller
6 rooftop scale.

7 MR. KAINS: Okay. Very good.

8 Mr. Keyt, you weren't here for the beginning
9 of Mr. Timmis's testimony. Ms. Kennedy has been going
10 through his education and his background and I can't
11 ask you whether you object or not because you haven't
12 been here, but I am satisfied that he should be
13 qualified as an expert witness, so I'm just going to
14 allow him in whether you object or not.

15 MR. KEYT: Okay.

16 MR. KAINS: Thank you, Mr. Timmis.

17 Go ahead, Ms. Kennedy.

18 MS. KENNEDY: Thank you.

19 **QUESTIONS BY MS. KENNEDY:**

20 Q. So you reviewed the specs for the panels
21 you testified to, have you also looked at the heights
22 of these proposed panels?

23 A. Yes.

24 Q. Are you getting paid to be here today,

1 Mr. Timmis?

2 A. Yes.

3 Q. Are you getting paid to tell the board
4 about your analysis and your independent findings of
5 that glare and glint analysis that you performed?

6 A. Correct, yes.

7 Q. And the company named Mural Energy, LLC,
8 it's not paying you to tell committee what it wants
9 you to say; is that correct?

10 A. No.

11 Q. Did you, in fact, perform a glint glare
12 analysis for this proposed project?

13 A. Yes.

14 Q. What exactly goes in to performing such
15 an analysis?

16 A. For these analysis I use the technology
17 developed by Sandia National Technologies that was
18 licensed to Forgesolar which is where the reports come
19 from. They use a glare gauge analysis where I
20 basically draw out the footprint of the solar array
21 areas, add in the specifications of the panel, if it's
22 tracking the heights, if there's going to be
23 backtracking, adding in surrounding receptors, whether
24 they're using residential homes or scenic structures,

1 nearby roadways or highways, and finally reviewing FAA
2 guidance to see if there's a nearby airport and flight
3 paths. Reviewing all those and then running the
4 analysis and interpreting the results.

5 Q. You mentioned using technology developed
6 by the Sandia National Laboratory, but what is that
7 specific tool called?

8 A. The specific tool is Sandia a glare
9 hazard analysis tool or SGHAT, and that's what's used
10 in the Forgesolar Program.

11 Q. And just to clarify for the committee
12 and for the record, what exactly is a glint and glare
13 analysis? What does it study, what does it look at?

14 A. A glint and glare analysis looks at
15 either a brief or glint or prolonged glare exposure
16 from reflected light from in this case solar panels.
17 It reviews basically for the entire year using the
18 path of the sun in various formulas and calculations
19 to see if throughout the -- a year would these panels
20 project any glare to the receptors I programed in.

21 Q. Did you prepare a written report based
22 on the glint and glare analysis that you performed?

23 A. Yes.

24 Q. And is that submitted in Appendix G in

1 the application binder materials?

2 A. Yes.

3 Q. What, if anything, can you tell me about
4 the assumptions that the SGHAT uses or does not use
5 for a glint glare analysis?

6 A. With the program itself it has some
7 various assumptions including it -- for the system
8 itself it doesn't take in changes in atmospheric data,
9 so it expects for this program clear skies the entire
10 way, it doesn't take in outside topography of what's
11 programed in where the panels, so it doesn't take in
12 mountainsides or berms or anything like that that
13 could block potential views from glare, same thing
14 with vegetation, so it -- with these models it expects
15 a pristine conditions, basically just going by
16 formulas to see what the -- if glare would occur.

17 Q. So based on what you just testified to
18 would you consider it to be a conservative analysis?

19 A. Yes, these results are the -- I guess
20 the way we would say the worse case scenario for glare
21 to happen.

22 Q. Vegetation would not be existing
23 structures?

24 A. No, not unless programed in with an

1 additional tool.

2 Q. And did you specifically model in any
3 existing structures in this glare analysis?

4 A. No, not for this one provided.

5 Q. And does it take into account any
6 screening from inside or outside of the solar array?

7 A. No.

8 Q. Did you take into account the tilting of
9 the panels for this study?

10 A. Yes. For this study it was programed in
11 the 60 degree tracking angle going east to west and
12 also a backtracking angle for when the panels would
13 lower to prevent shading for other panels that have
14 yet to reach their meter max angle while tracking the
15 sun.

16 Q. And when you perform a glint glare
17 analysis how are the results quantified?

18 A. The results are quantified in various
19 levels of glare. The green -- they usually provide
20 are green glare which has a low potential for
21 afterimage. A yellow glare which has potential for an
22 afterimage and red glare which is cases of causing a
23 retinal damage, granted red glare is an extreme,
24 usually not modeled.

1 Q. What is considered afterimage?

2 A. Afterimage is when you see a brief say
3 like staring of a light or such or like a glints
4 glare, seeing glints, a glare image in your eyes and
5 either when looking away or when that object or
6 instance ceases that you still have an afterimage or
7 continuing image of seeing that flash or glare.

8 Q. Can you give me an example of what would
9 be considered a green afterimage.

10 A. Green is -- as stated by FAA in their
11 more recent examples they see green glare as more
12 reflectives off a body of water, say a lake, so
13 something very low impact.

14 Q. What about yellow?

15 A. More concentrated, something you would
16 generally expect to need to put sunglasses on in
17 instances.

18 Q. And what about an example of red
19 afterimage?

20 A. Red glare is more or less you're staring
21 directly at the sun.

22 Q. Which is not recommended?

23 A. No. No.

24 Q. You testified that you did, in fact,

1 perform a glint and glare analysis for this particular
2 project, what conclusions, if any, did you reach?

3 A. We concluded that there was one instance
4 of green and yellow glare for a section of 400 East
5 Road only for one particular panel area that was
6 proposed adjacent to it. The overall limits of green
7 glare I believe were 100 minutes throughout the year
8 and yellow glare being around 1,000 minutes for the
9 year located -- and this is not the entire year, it's
10 prolonged, the model found that this was only in the
11 winter months of November through January.

12 Q. And, again, on an extremely conservative
13 assumption, right?

14 A. Correct. That this is basically the
15 best case scenario that glare would have occurred. In
16 real life conditions it would most likely be much less
17 or even null.

18 Q. And it's my understanding you prepared a
19 short power point presentation; is that correct?

20 A. Correct.

21 Q. And is that power point you prepared up
22 on the screen?

23 A. Correct.

24 Q. Did you personally prepare this?

1 A. Yes.

2 Q. And did you prepare it in anticipation
3 of today's hearing?

4 A. Yes.

5 MS. KENNEDY: I believe I've handed that
6 out marked as Exhibit 5. I'd like to move for entry
7 of that exhibit.

8 MR. KAINS: Yes. Everybody has Exhibit
9 5 on the committee? Very good.

10 And, Mr. Keyt, do you have any objection to
11 the admission of 5?

12 MR. KEYT: No objection.

13 MR. KAINS: All right. It's in. Go
14 ahead, Ms. Kennedy.

15 MR. GREENWELL: I have a question.

16 MR. KAINS: Yes.

17 MR. GREENWELL: Are panels -- are they
18 treated somehow to minimize all these glares or...

19 THE WITNESS: Yes. This model uses
20 what -- based on the panel's specification I was given
21 that they are smooth panels with antireflective
22 coating put on them. Generally speaking that
23 causes -- it has some reflectance, but generally 5 --
24 8 percent of what is expected to hit the panels.

1 MR. GREENWELL: Does that degrade over
2 time or...

3 THE WITNESS: To my knowledge, no. I
4 believe that that percentage lasts through its
5 lifetime, but I am not -- I would need to verify that
6 statement.

7 MS. KENNEDY: Mr. Timmis, do you want to
8 walk through this presentation.

9 THE WITNESS: Sure. On the left side I
10 have directly from the Forgesolar analysis results
11 showing the outline of the panel that was drawn, this
12 is on the west side of the, I believe it is the
13 quarry, that only showing here that this specific
14 section was producing yellow glare and to this
15 specific receptor which is a drawn segment of 400 East
16 Road, it's not the entirety of the road, it's only
17 what was drawn based on what is presumed to be visible
18 and only this specific section which is generally
19 modeled the area where the panels are expected to
20 cause green or yellow -- green and yellow glare is
21 shown on this aerial image highlighted by the orange
22 box.

23 **QUESTIONS BY MS. KENNEDY:**

24 Q. Go to the next slide?

1 A. Yes, please. And because of -- there
2 was a predicted yellow glare mitigation was
3 recommended that vegetative screening which was talked
4 about early directly along the edge of the panels in
5 400 East Road to prevent any glare and an additional
6 analysis was performed just to determine if this
7 vegetative screening at approximately 10 feet would be
8 adequate and was found to prevent any additional
9 glare.

10 Q. Mr. Timmis, you sat here in this
11 courtroom while we had a subject matter expert
12 testify, his name was Jason Hellendrung, do you recall
13 his testimony?

14 A. Yes.

15 Q. And he testified to various screening or
16 buffering proposals our company was willing to
17 undertake, do you recall that?

18 A. Yes.

19 Q. And to the best of your knowledge is
20 that why there is proposed vegetative screening along
21 400?

22 A. Yes. Based on results that I found I
23 recommended that screening to be put specifically on
24 this area.

1 Q. And that would specifically be along
2 North 400 East Road?

3 A. Correct.

4 Q. What about 1000 North Road? There was
5 no proposed buffer screening for that road?

6 A. No, I did not recommend screening there
7 because the results showed that no glare was to occur.

8 Q. Specifically with reference to the
9 section of East Road how much green glare is
10 anticipated?

11 A. Around 100 minutes of green glare. I
12 believe specifically it is 184 in 1 hour -- or roughly
13 184 in that analysis and 269 in a follow-up analysis.

14 Q. What about yellow glare?

15 A. Roughly between the 2 analysis done
16 1,511 and 1,684 annual minutes of yellow glare.

17 Q. And so you just mentioned that there was
18 analysis 1 and analysis 2 that was run, what is the
19 difference between -- why -- why were two analyses
20 done?

21 A. Yes. I break down these analyses to
22 show, analysis 1 I have for sort of first story or
23 commuter car receptor levels being roughly 6 foot for
24 residential and for commuter cars, I believe I used 5

1 feet as a height. Analysis 2 looks at it at a higher,
2 with 16 feet used for stationary receptors and 9 feet
3 for commercial trucks of a larger size along the
4 vehicle routes model.

5 Q. For clarity purposes, would the same
6 conservative assumptions apply for both analyses that
7 you performed?

8 A. Yes.

9 Q. Will this portion of the roadway that we
10 were just talking about be subject to any red glare?

11 A. No.

12 Q. And are there any steps to mitigation
13 that could be taken to reduce the amount of glare
14 anticipated?

15 A. Yes. Recommended is vegetative
16 screening is the most common way to mitigate for any
17 potential for glare.

18 Q. Have you reviewed the vegetative
19 screening that's been proposed by Mural Energy?

20 A. Yes.

21 Q. Specifically along East Road?

22 A. Correct.

23 Q. And are you familiar with the type and
24 the height of the screening that's been proposed?

1 A. Yes.

2 Q. Were you able to simulate that into a
3 subsequent study?

4 A. Yes. An average height of 10 feet was
5 used to simulate it for the follow-up analyses.

6 Q. And what impact, if any, would the
7 proposed screening have specifically on East Road, for
8 example?

9 A. It was found that for both the analysis
10 of first story receptors and analysis 2 of second
11 story receptors that this mitigation would prevent any
12 glare along 400 East Road.

13 Q. When you say prevent any glare, would be
14 entirely or would there still be?

15 A. Prevent entirely, no glare would be
16 predicted.

17 Q. Are there any other portions of the
18 project or adjacent parcels of land that would be
19 exposed to glare or impacted by glare?

20 A. Based on the results and the number of
21 receptors used to simulate adjacent properties and the
22 adjacent areas, no.

23 MS. KENNEDY: I have nothing further.

24 MR. KAINS: Very good. Thank you,

1 Ms. Kennedy.

2 Are there questions for Mr. Timmis, first
3 from members of the Vermilion County Wind and Solar
4 Committee? Mr. Puzey.

5 MR. PUZEY: Yes. Is this essentially
6 paper exercise that's all based on data that you
7 collected from this program that's available rather
8 than you going out and setting receptors and testing
9 equipment on site?

10 THE WITNESS: Yes, it is purely a
11 formula exercise. In order to go further for a higher
12 tuned one would be involving the visual analysis,
13 visual -- visual impact assessments and comparing
14 infield photos to see if -- say, if I got glare as
15 part of a receptor, relying on them to show me if
16 there is a clear view and then predicted glare would
17 make sense and mitigating for that. Yep.

18 MR. ELMORE: You mentioned antiglare
19 coating on these panels, is that kind of industry
20 standard, that all these panels come with that type of
21 material on them?

22 THE WITNESS: Yes. The general industry
23 standard that I've come to see is smooth panels with
24 antireflective coating on each. In very rare cases I

1 would see something different.

2 MR. GREENWELL: So why wouldn't you
3 expect similar results on 680 East where it's -- it's
4 right there close to the road?

5 THE WITNESS: Based on why it was only
6 specifically this section of the road could be simply
7 that the -- as the sun during the winter months that
8 there was predicted had correct angle for vehicle
9 traffic on that road to get a little bit of glare.

10 It's important to note that the glare
11 predicted is for those winter months around 3 and 4
12 p.m., where sunset is occurring, so at that angle of
13 the sun on the west from the road where it's being
14 predicted of those panels you're experiencing glare at
15 almost a direct angle. It's -- it's the high angle of
16 incidents that it's causing glare here, not sure why
17 it's not showing up with other vehicle routes with
18 that close of proximity to other panels, it just
19 happened to be that this corner was the, I guess,
20 sweet spot of glare to occur, but with follow-up
21 analyses with -- as the layout of the panels change
22 and double checking with the tilting angel,
23 backtracking angle, this was the only area that had
24 glare occur.

1 MR. KAINS: Mr. Puzey.

2 MR. PUZEY: So in common terms the glare
3 would occur to someone who's driving down the road
4 either north or south, I'm not sure which direction,
5 and then they happen to get some glare from that one
6 rectangle there?

7 THE WITNESS: Yes. It was just that
8 specific section in close proximity would cause glare
9 to a car traveling along that section both at a
10 commuter car level and a commercial truck level were
11 experiencing brief moments of glare along that road.

12 MR. PUZEY: But it seems logical that
13 another road that's 2 and a half miles to the east
14 which is 680 instead of 400 would have the same
15 potential for that?

16 THE WITNESS: It would -- I would
17 believe that's why I always double check my numbers
18 cause even with repeated runs the analysis sometimes
19 it would need minute changes in minutes of glare that
20 with the multiple analyses ran there was nothing else
21 that occurred. The same parameters were used for
22 every panel in the area. Similar to this the road was
23 modeled in as close as it was viewed, but in this case
24 it just didn't have glare predicted.

1 MR. PUZEY: So for that particular
2 example that only happens like four hours in what time
3 frame, in December from when it's going to be?

4 THE WITNESS: It's from November to
5 January and the green glare is predicted during those
6 days of those months less than 2 minutes, for yellow
7 glare it's looking at a 30 minute window glare
8 occurring, and in a stationary point it's important to
9 note that it's not for any nearby receptors or homes
10 seeing glare, it's for a vehicle route. It's not like
11 the vehicle's going to stay stationary where it's
12 getting glare will be even less time exposed while
13 driving along the route.

14 MR. PUZEY: So 2 minutes per day for 100
15 days or so --

16 THE WITNESS: Yes.

17 MR. PUZEY: -- is what you're taking
18 about?

19 Okay. Thank you.

20 MR. RUDD: When you do these
21 calculations and formula and you set out these sensors
22 is it taking into account the elevation of the road
23 and where the panels are there as compared to what
24 they are on the other road?

1 THE WITNESS: Yes.

2 MR. RUDD: So the difference in the
3 elevation is causing the glare not to show up?

4 THE WITNESS: Yeah. It could be that
5 that's the reason why glare happened there is that the
6 elevation along that road which the program takes in
7 consideration that it was at an inadequate angle to
8 view glare along that section, but while the model
9 doesn't take in topography from outside sources it
10 does take in elevation and topography for where I draw
11 the panels and where the receptors are. Whether it's
12 a stationary point or the entirety of the road they
13 can mark the elevation as it goes.

14 MR. RUDD: Okay. Thank you.

15 MR. FOUREZ: I got one.

16 MR. KAINS: Mr. Fourez.

17 MR. FOUREZ: And I know you can't what
18 if everything when you're looking at these things, but
19 within these neighborhoods there are a lot of
20 vehicles, farm equipment where the operator is
21 actually sitting 10 to 15 feet above the road. Does
22 that make any difference in how -- when and how you
23 would pick up glare if you were sitting consistent
24 down in a car or pickup truck you're sitting 15 feet

1 above the surface of the road, how does that affect
2 it?

3 THE WITNESS: Sometimes it's -- in my
4 experience it can either have no effect, a foot
5 difference, whether the observation point either in a
6 car, like a foot difference for the observer or
7 receptor or a foot difference in the height of the
8 panels. Sometimes it's -- does cause a change in the
9 amount of glare predicted, but in my experience more
10 often than not a slight difference in elevation, a
11 foot doesn't cause a ripple effect for glare. Larger
12 examples I've seen where maybe 3 or 4 feet difference
13 then we could be seeing at a different angle and then
14 you're experiencing glare. The amounts I don't think
15 would be anything outside of what's already predicted
16 here.

17 MR. FOUREZ: So the operator of a
18 combine, four wheel drive tractors, maybe 10 feet
19 above, maybe you gotta climb up a ladder to get in
20 them --

21 THE WITNESS: Yeah.

22 MR. FOUREZ: -- in a cab, I was just
23 wondering.

24 THE WITNESS: No, it's -- and overall

1 it's looking at it of generally you experience glare
2 based on the angle of reflectance which is looking at
3 the source being the sun hitting the panels and then
4 bouncing to where the receptor is. In cases where you
5 get glare is when you have that highest angel. So
6 looking at say you're adjacent to the panels almost
7 flat to where they are at, if you're say higher and
8 the sun setting at a different angel if maybe you
9 would get glare when it's, I don't know, high in the
10 sky and the angel instance hits it that way, but in my
11 experience, especially with -- with single access
12 tracking panels you only get glare during sunset
13 and -- or -- yeah, sunset and sunrise where that --
14 the sun is at the horizon and you have that highest
15 angel instance. For an elevated, say, tractor or
16 other farm equipment you're increasing that height,
17 increasing that angle, I'd say you're, in this
18 scenario you're less likely to get glare. So although
19 we didn't model at those heights I still think that
20 overall you wouldn't get glare except perhaps if that
21 vehicle was traveling on that section of 400 east.

22 MR. KAINS: Any other questions for
23 Mr. Timmis from the committee? Very good.

24 Questions for Mr. Timmis from members of

1 units of local government, including the Vermilion
2 County Board and any local school district?

3 Questions for Mr. Timmis from the general
4 public?

5 Questions for Mr. Timmis from counsel for
6 Vermilion County, Mr. Keyt.

7 **CROSS-EXAMINATION,**

8 **QUESTIONS BY MR. ANDREW KEYT:**

9 Q. Mr. Timmis, just a few questions. So
10 the -- what was the -- what was the -- I guess the
11 height of what you would measure the passenger
12 vehicles traveling down these roads?

13 A. That would be an analysis 1 that I
14 modeled it around 5 feet.

15 Q. Okay. So as Mr. Fourez had mentioned,
16 there's -- there's quite a bit of farm equipment that
17 sits quite a bit higher and you -- your testimony was
18 that a foot or so may not make much of difference, but
19 if we get beyond a foot or -- or -- I think your words
20 were 3 feet, if you were beyond 3 feet in difference
21 it might make difference, is that true or not true?

22 A. I guess a good way to model it as an
23 example is in this case where along the same road
24 analysis 1 had the vehicle at 5 feet travelling along

1 finding 100 minutes of green glare and 1,500 minutes
2 of yellow glare. Analysis 2 found similar results for
3 a vehicle travelling at 9 feet in height, it was a
4 little higher, I believe we were looking at 120
5 minutes of green glare and 160 in change -- or 1,600
6 in change of yellow glare for a similar result. So
7 there was within that height difference between 5 and
8 9. There was a slight increase in the number
9 predicted between those two analyses but it wasn't
10 something too extreme in this example.

11 Q. So a farm vehicle if someone's in it, a
12 tractor or sprayer, they may experience a higher level
13 of glare than someone in a passenger vehicle?

14 A. Yes, but in this case the difference
15 seems to be only 20 or 100 minutes of glare throughout
16 the year. So it would be maybe an increase of that
17 day of experiencing it, maybe an increase in duration
18 of maybe only a couple minutes, 1 or 2 minutes, but
19 overall I don't think we're looking at more
20 detrimental levels of someone at a higher standpoint
21 than a vehicle.

22 Q. Okay. I follow you.

23 The modeling, I guess one of the questions
24 that stands out a little bit is the modeling shows

1 that this particular section which appears to be just
2 east of Road 400 East, that is the only section that
3 you have found that there might be a glare problem in
4 association with vehicles traveling the roadways in
5 this particular project area?

6 A. Yes.

7 Q. Okay. After construction occurs if
8 there are other areas that are determined to have a
9 glare problem is that an issue that can be resolved
10 after the fact if it's been built and there does
11 become an issue with glare after construction?

12 A. I believe that would go to the client
13 to -- I would -- I would suggest in my position
14 additional vegetation screening along the problem
15 areas. In this case it would be relying on rather
16 than the model scenario relying on in-person accounts
17 of what's being experienced and then developing
18 mitigation based on those accounts.

19 Q. Okay. Is the glare -- the glare issue
20 is -- if I'm understanding you correctly, again, not
21 great with science in school, but your sun is
22 generally oriented to the south, fair?

23 A. Yeah.

24 Q. Okay. If there is going to be a glare

1 issue it's likely to be from people or likely to
2 impact people to the north of where the panels may be,
3 whether traveling by car or otherwise, fair?

4 A. Yeah, I would say that's fair. I think
5 it would -- yeah, normally in the northern positions
6 or it could just come down to the difference in
7 topography and the elevation between where the panels
8 are and where the individual viewing it is. Whether
9 they're at a higher elevation or lower elevation there
10 could be a perfect angel that just happens to reflect
11 glare towards that individual or vehicle.

12 Q. Is it anticipated that there would be
13 any glare impact to people southern -- south of the
14 project is my question?

15 A. Oh, based on the receptors model in
16 order to model the adjacent landowners and farther
17 landowners, 20 different observation points were
18 chosen around, I'm not sure how many of them at this
19 moment were south, but there was no glare found for
20 any of those southern receptors. There were a number
21 chosen in other vehicle routes to the south but only
22 this particular area was predicted to have glare.

23 Q. All right. So if someone's traveling
24 south on 400 East Road the area that there is

1 suggested screening is only that area that is
2 immediately between the project panels and 400 East
3 Road, would it also help to have screening that goes
4 along the northern edge of the project area?

5 A. Based on the results on the left side
6 that -- it's very faint with the light, but there --
7 it's only showing yellow glare predicted along that
8 northeast corner of that array area drawn. I don't
9 believe it would be necessary to do additional
10 screening along that section. As of right now in what
11 was modeled putting the screening along the eastern
12 edge which was shown in the previous testimony, that
13 negated the glare predicted. So as of the standpoint
14 of what my analysis shown, one, this particular level
15 of screening is sufficient.

16 Q. Okay. But if I'm traveling south on 400
17 East Road and I'm approaching the wind -- or I'm
18 sorry -- the solar array, at what point does that
19 passenger vehicle or other vehicle start experiencing
20 the impact of glare?

21 A. Based on the model I would say just
22 north of the array -- if I can walk over to the figure
23 here. Based on the route that was drawn, this section
24 is where the yellow glare is being seen and compared

1 to the aerial image it would be along this section in
2 close proximity. It's actually -- you can see there's
3 a slight paint marker 1 mark was drawn and you can see
4 it on this aerial image here. So that yellow glare
5 would generally be predicted along here, this
6 particular section, and the model looks at it from
7 driving north and south, both ways, so which either
8 direction you're driving you would experience the
9 glare along this particular segment.

10 Q. Understood. When the -- there was some
11 testimony from the prior witness that when the
12 vegetation would be planted the recommendation would
13 be somewhere between 6 and 8 feet, your modeling
14 showed -- or your modeling took in the vegetation
15 buffer of 10 feet.

16 A. Yes.

17 Q. So did you do any modeling at a
18 vegetation buffer between 6 and 8 feet?

19 A. No. 10 feet was chosen -- I believe he
20 said that initial plantings would be around 6 and 8
21 and a hopeful height of growing to around 10 to 14
22 feet at maturity. So my analysis took an average of
23 that maturity at 10 feet.

24 Q. Okay.

1 A. It did not model at the initial planting
2 size of 6 or 8.

3 Q. So while it's -- or before the
4 vegetation buffer is fully grown you would anticipate
5 that there would be additional glare beyond what you
6 have modeled so far?

7 A. I don't know about additional what's
8 predicted. The model itself is conservative so the
9 levels I'm showing in it are high compared to what
10 real life would be. Granted, with that initial height
11 planting there could be glare until it's fully grown,
12 but my model I did not do an analysis of initial
13 planting.

14 Q. So my -- my point, you don't have a --
15 you don't have a model that would indicate what the
16 glare would be at 6 to 8 feet?

17 A. No.

18 Q. Okay.

19 A. Not at this time.

20 MR. KEYT: Okay. That's all the
21 questions I have. Thank you.

22 MR. KAINS: Redirect, Ms. Kennedy.

23 MS. KENNEDY: Just a few questions.

24

1 **REDIRECT EXAMINATION,**

2 **QUESTIONS BY MS. COURTNEY KENNEDY:**

3 Q. Mr. Timmis, in the two analyses that you
4 performed was there any glare shown or would there be
5 any adjacent residences impacted by glare?

6 A. No.

7 Q. And then going back to this North 400
8 East Road, you've identified that area I believe it's
9 outlined in orange where that possible glint glare
10 could occur, correct?

11 A. Yes.

12 Q. So it's not down along the entirety of
13 North 400 East Road in reference to this proposed
14 parcel?

15 A. No. That is correct.

16 Q. But the company has agreed or is
17 suggesting screening along the entire parcel that
18 butts up to North 400 East Road?

19 A. Yes. The screening be proposed by the
20 client goes beyond blocking the problem areas I would
21 say.

22 MS. KENNEDY: I have nothing further.

23 MR. KAINS: Very good. Thank you.

24 Final questions for this witness from the committee?

1 All right, very good. Thank you. Thank you,
2 Mr. Timmis, you may step down. You're excused.

3 (Witness excused.)

4 MR. KAINS: How long is your next
5 witness?

6 MS. KENNEDY: I think we could do it in
7 20 -- 20 minutes or less.

8 MR. KAINS: Let's do it.

9 MS. KENNEDY: I'd like to call Tricia
10 Pellerin.

11 MR. KAINS: Good afternoon.

12 T R I C I A P E L L E R I N,

13 was called as a witness on behalf of the Petitioner
14 and, having been first duly sworn, testified as
15 follows:

16 MR. KAINS: All right. Ms. Kennedy, you
17 may proceed.

18 Actually, can I get the spelling of your
19 first and last names.

20 THE WITNESS: Yeah. Patricia Pellerin,
21 and it's spelled, T-R-I-C-I-A, and then,
22 P-E-L-L-E-R-I-N.

23 MR. KAINS: Very good. Thank you.

24

1 **DIRECT EXAMINATION,**

2 **QUESTIONS BY MS. COURTNEY KENNEDY:**

3 Q. Ms. Pellerin, tell us a little bit about
4 your educational history.

5 A. I have a bachelor and master's degree in
6 chemical engineering from the University of Western
7 Ontario in London, Ontario.

8 Q. And do you hold any degrees,
9 certifications, or licenses?

10 A. I'm a member of the Institute of Noise
11 Control Engineering.

12 Q. And what did you do to become a member?

13 A. Pass a certification exam.

14 Q. Sure. How are you presently employed?

15 A. I work at Tetra Tech.

16 Q. And what is your official job title at
17 Tetra Tech?

18 A. I'm a senior acoustic engineer and
19 project manager.

20 Q. And what job duties and responsibilities
21 does that title hold?

22 A. I lead the Tetra Tech's acoustic's group
23 and I oversee all of the noise-related project work
24 and engage in acoustic monitoring modeling and conduct

1 acoustic assessments mainly for the project
2 permitting.

3 Q. How long have you been employed in that
4 position?

5 A. 16 years.

6 Q. Do you have any other relevant
7 experience aside form Tetra Tech?

8 A. Uh-huh. Prior to Tetra Tech I worked at
9 another environmental consulting company named Jacques
10 Whitford in Halifax, Nova Scotia.

11 MS. KENNEDY: I move to treat her as an
12 expert witness.

13 MR. KAINS: I just have a couple of
14 questions.

15 Approximately how many solar farms have you
16 done acoustics analysis on?

17 THE WITNESS: Approximately 50.

18 MR. KAINS: Very good. I have nothing
19 further.

20 Mr. Keyt.

21 MR. KEYT: No objection.

22 MR. KAINS: All right. Ms. Pellerin is
23 in as an expert witness and she will be treated
24 accordingly with respect to time limits.

1 Go right ahead.

2 MS. KENNEDY: Thank you.

3 **QUESTIONS BY MS. KENNEDY:**

4 Q. What is the largest solar farm that
5 you've performed a study on?

6 A. I'd say approximately 500 megawatts.

7 Q. And do you recall where that project
8 was?

9 A. Certainly there have been two of them,
10 one in Washington State and one in Idaho.

11 Q. Are you familiar with Mural Energy, LLC?

12 A. Yes.

13 Q. How so?

14 A. I conducted an acoustic assessment for
15 this project.

16 Q. What materials, if any, did you review
17 when performing that acoustic assessment?

18 A. Sure. I reviewed the site plans as well
19 as the dimension of the relevant noise generating
20 equipment as well as the manufacturer sound
21 specifications.

22 Q. And so when you say noise generating
23 equipment you mean inverters, the panels themselves?

24 A. The inverters and transformers.

1 Q. And you're being paid to be here today;
2 is that correct?

3 A. Yes.

4 Q. And that's through your employment with
5 Tetra Tech?

6 A. That's correct.

7 Q. And Mural Energy is not paying you to
8 tell the board what Mural Energy wants you to say; is
9 that correct?

10 A. No.

11 Q. What exactly is an acoustic assessment
12 or a noise analysis?

13 A. An acoustic assessment is the valuation
14 of sound levels that will be generated from the
15 proposed project and typically includes assessment of
16 compliance relative to the applicable noise
17 regulations and requirements.

18 Q. Have you, in fact, performed an acoustic
19 assessment for this project?

20 A. Yes.

21 Q. And did you prepare a written report
22 concerning your findings of that acoustic assessment?

23 A. I did, yes.

24 Q. Is that report included in the

1 application materials as Appendix F?

2 A. Yes.

3 Q. And it's my understanding that you
4 prepared a short slide as a power point presentation
5 for today?

6 A. That's right.

7 Q. And did you personally prepare that?

8 A. I did.

9 Q. Was it prepared in anticipation for
10 today's hearing?

11 A. It -- it was.

12 MS. KENNEDY: I'd like to move to admit
13 I believe it should be Number 6?

14 MR. KAINS: Number 6. Does everybody
15 have one, everybody on the committee?

16 MR. FOUREZ: I didn't get one.

17 MR. KAINS: Okay. Andy, is there an
18 extra one for Mr. Fourez.

19 Could you bring one forward, please. You
20 move for admission?

21 MS. KENNEDY: Sorry?

22 MR. KAINS: Why don't we wait until she
23 describes it a little bit more.

24 MS. KENNEDY: Okay.

1 MR. KAINS: You can move to admit at the
2 end of her testimony.

3 MS. KENNEDY: Okay.

4 MR. KAINS: Go ahead, ma'am.

5 THE WITNESS: Yeah, so, as I stated,
6 Tetra Tech conducted an acoustic assessment of the
7 Mural Solar Energy Project and of particular
8 applicable noise requirements and regulations for this
9 project were those described by the Illinois Pollution
10 Control Board, and I will say they prescribe a
11 comprehensive noise regulation which include both
12 daytime and nighttime regulations based on the land
13 use and land use is described very thoroughly by their
14 land base classification system which is part of the
15 IPCB noise regulations and they do prescribe octave
16 band containment. So that means there's limits
17 according to every octave band frequency of sound and
18 we analyze the operational sound for the project, we
19 do review construction noise as well, and sound levels
20 were projected up off the receptors including
21 residences but also Class B receptors which are
22 typically commercial receptors as well, but residences
23 are Class A receptors, like residences are the most
24 noise sensitive, and then we assess -- you know, we

1 kind of get computer simulation and assess compliance
2 with those IPCB octave band frequency limits.

3 So the program that we use which is widely
4 recognized and accepted by regulatory agencies across
5 the United States and Canada and elsewhere is CadnaA
6 and it conforms to the international organizational
7 for standardization, standard 923 which then describes
8 acoustic sound propagation, and we basically, similar
9 to the project of three dimension between site
10 specific information like terrain and then model the
11 octave band and broadband, broadband between the DBA
12 levels as opposed to the octave band levels which are
13 unweighted and calculating those levels at height
14 receptors as I say such as residences.

15 The modeling, we incorporate the number of
16 conservative measures. The ISO standard apparently is
17 conservative and that it's to omnidirectional downwind
18 sound propagations so that means essentially that it
19 assumes that every receptor downwind and every sound
20 source constantly which is a physical impracticality
21 but introduce the conservative within the model such
22 that it kind of enhances sound propagation of the
23 receptors beyond what is realistic.

24 In addition, within the site we assumed a

1 fully reflective ground absorption rate so that
2 essentially means that sound is not absorbed at all
3 and it's fully reflective therefore also enhancing
4 sound propagation offsite.

5 In addition we assumed that all of the
6 equipment would be operating at maximum rate of sound
7 power according to the manufacturer's specifications
8 both during daytime and nighttime conditions which is
9 conservative, because in all likelihood during
10 nighttime conditions the equipment will be operating
11 at a lower level which corresponds to lower sound
12 emissions. However, as a matter of conservative we
13 assumed that they could -- potentially could offer the
14 equivalent even during the nighttime which isn't going
15 to happen.

16 But despite including all of those
17 conservative assumptions the modeling results showed
18 that the project was demonstrated -- successfully
19 demonstrated compliance at all the noise sensitive
20 receptors which were identified within a mile of the
21 project, so, yeah -- so it was good findings and,
22 yeah, that's it.

23 MS. KENNEDY: I have no further
24 questions of her. I would, again, renew my motion to

1 admit.

2 MR. KAINS: Yes, Mr. Keyt, do you have
3 an objection to the admission of Exhibit 6?

4 MR. KEYT: No objection.

5 MR. KAINS: Applicant 6 is in.

6 Now, questions for Ms. Pellerin from members
7 of the Wind and Solar Committee?

8 MR. ELMORE: Was there any investigation
9 done on how the noise may affect wildlife or anything,
10 you know, obviously we're not as sensitive to noises
11 but some other wildlife may be.

12 THE WITNESS: Sure, my -- I believe I
13 think perhaps another expert on the panel addressed
14 wildlife impact.

15 MR. ELMORE: Sure.

16 THE WITNESS: Mine are really truly
17 targeted to human receptors.

18 MR. ELMORE: Sure.

19 MR. RUDD: You said that you did a
20 conservative adjustment even though the sound probably
21 wouldn't be as high during the nighttime hours.

22 THE WITNESS: Yes.

23 MR. RUDD: Okay. Again, is it mostly
24 taking into consideration any absorption by the

1 vegetative growth?

2 THE WITNESS: No, it doesn't. So we
3 don't assume any absorption. We ignore any buildings
4 or screenings aside from the topography itself, but
5 not from the screening -- the visual screening that's
6 been discussed earlier, no.

7 MR. RUDD: Okay.

8 MR. PUZEY: So, for example, if I'm not
9 in the blue area I should be potentially hearing I'll
10 call it sound in a 40 to 45 DBA range?

11 THE WITNESS: Uh-huh.

12 MR. PUZEY: Is that audible?

13 THE WITNESS: Audible. It may be
14 audible depending on the time of day.

15 MR. PUZEY: Okay. Is that -- that's
16 what it's predicting during the day or at any time?

17 THE WITNESS: Any time.

18 MR. PUZEY: Okay.

19 THE WITNESS: Yep.

20 MR. PUZEY: All right. So if I'm in the
21 pink area then it's even less audible?

22 THE WITNESS: It is low audible sound.

23 MR. PUZEY: Okay. If I'm sitting or
24 standing in the pink area in this display actually

1 says that I would be potentially listening to a sound
2 that is 35 to 40 decimals.

3 THE WITNESS: Correct, yes.

4 MR. PUZEY: All right.

5 THE WITNESS: Yes.

6 MR. PUZEY: Okay. Is that audible in
7 the common ear, put it that way?

8 THE WITNESS: Again, it kind of depends.
9 I mean, I have conducted a lot of sound surveys in my
10 time and that -- I mean, I didn't conduct a survey for
11 this project, that's not required, but, I mean, most
12 often nighttime sound levels -- I mean, they don't
13 typically get, you know, I mean, it would be probably
14 be low 30's on average, so even if it were to operate
15 at maximum, it -- it may be audible at times but
16 certainly low level sound, 30's is very low.

17 MR. PUZEY: What I'm getting at is can I
18 hear it if I step outside and would I have to be
19 standing right there?

20 THE WITNESS: At certain times and
21 during certain neurological conditions you may be able
22 to hear it, however, that's not really part of the
23 regulations, they require that they adhere to certain
24 levels but not that it's inaudible.

1 MR. PUZEY: Okay. Understand.

2 MR. KAINS: All right. Any other
3 questions for the witness for members of the
4 committee? Very good.

5 Questions from members of units of local
6 government, including Vermilion County Board and local
7 school district?

8 Questions from the public? Yes, Mr. Puzey.

9 MR. MARK PUZEY: One quick question
10 about the map and I apologize I couldn't see from back
11 there what your scale was, but in the blue area you're
12 saying that may or may not be audible. Can you give
13 us an example of some piece of equipment, some
14 household item that would be analogous in that sound
15 range.

16 THE WITNESS: So the blue, that would
17 probably be analogous to a sound level in a library
18 environment, very, very low level sound.

19 MR. MARK PUZEY: So would you recommend
20 at all any sound blocking devices around the
21 inverters?

22 THE WITNESS: No.

23 MR. MARK PUZEY: Okay. What about the
24 transformers?

1 THE WITNESS: No. No. The closest
2 residence to the transformer substation was
3 approximately 3,500 feet away. So, no, I don't --
4 wouldn't recommend noise mitigation there.

5 MR. MARK PUZEY: Okay. I noticed in the
6 original application and I think it's even in the
7 second supplemental, one of the main transformers has
8 a sound blocking wall on the north side but only that
9 side and only that one transformer, why would that be?

10 THE WITNESS: I don't believe that's a
11 noise mitigation, perhaps it's a firewall, but
12 certainly not noise mitigation I implemented as part
13 of this noise assessment. So it could be a fire --
14 typically transformers they have fire walls a lot of
15 times between them. Now, I don't -- I'm not a
16 transformer engineer so I don't necessarily know how
17 those are determined, how many are needed, so that
18 perhaps may be what was showing on the map, I'm not
19 certain.

20 MR. MARK PUZEY: If it was determined
21 that the inverters or transformers did cause a noise
22 that was audible regularly at the residence
23 surrounding the site what would be a way to mitigate
24 that issue?

1 THE WITNESS: Oh, before I answer your
2 question, if you don't mind, I didn't model it with
3 that wall. Yeah, so my analysis reflects no noise
4 mitigation whatsoever.

5 But you could -- you could implement noise
6 mitigation walls, and actually they're perfect --
7 they're -- well, I shouldn't say perfect, but they're
8 very good for things like substation transformers
9 because they are kind of confined within the
10 locations, and certainly I've done a lot of mitigation
11 design on substations before and noise walls are a
12 good way to go.

13 MR. MARK PUZEY: And would the noise
14 from this equipment theoretically go down to
15 nonexistent at night when there's no power being
16 generated?

17 THE WITNESS: Well, I -- I don't know if
18 it's going to nonexistent but certainly it would be
19 reduced to what I modeled because I modeled -- so
20 transformers typically have three levels of pooling,
21 oil natural, air natural and then oil natural air --
22 air -- fan cooled levels 1 and 2. So I modeled it fan
23 level 2 which is the maximum potential sound level.
24 Most often at night at least based on my experience

1 it's not uncommon for them to go to the lowest level
2 of sound which is what oil natural and air natural,
3 but as I say, I didn't model that just in the event
4 that there's a possibility it could be operating a
5 little bit louder, but most often you're correct.

6 MR. MARK PUZEY: But the inverters
7 themselves would not be making the same noise?

8 THE WITNESS: Right. That's right.

9 MR. MARK PUZEY: Thank you.

10 MR. KAINS: Thank you, Mr. Puzey.

11 Any other questions for this witness from the
12 public?

13 MR. PUZEY: That sound wall that's
14 listed on page EP100, it's in the plan.

15 MR. KEYT: Can I ask a clarifying
16 question to that -- to get to that issue?

17 MR. PUZEY: I think they was just saying
18 it wasn't a sound wall.

19 MR. KEYT: Right, right. I understand.

20 MR. PUZEY: My point is there is
21 according to the model.

22 MR. KEYT: Your modeling did not include
23 a sound wall as far as you know?

24 THE WITNESS: It did not.

1 MR. KEYT: Okay. I guess my question
2 then is, if there is a sound wall does that -- does
3 that help mitigate sound?

4 THE WITNESS: That would be the results
5 of the analysis would be less than what I'm presented
6 in the report, yes.

7 MR. KEYT: I think that's what you're
8 getting at maybe?

9 MR. KAINS: All right. Questions from
10 any other members of the public?

11 Mr. Keyt, do you have any additional
12 questions for Ms. Pellerin?

13 MR. KEYT: Sure.

14 **CROSS-EXAMINATION,**

15 **QUESTIONS BY MR. ANDREW KEYT:**

16 Q. Along the same lines there's -- are you
17 able to give us something that is comparable like an
18 appliance or something like that that would be
19 comparable to say 35 to 40 decibels or 40 to 45
20 decibels?

21 A. Yes. Just one moment. So typically 35
22 it's determined as faint to very quiet and kind of say
23 it's just a typical wilderness area. When none of us
24 are talking in this room, I mean, right now it's

1 probably high 50's to low 60's, but if -- when none of
2 us are talking I would say it would be low 40's. As
3 far as appliances go, like a refrigerator is typically
4 more so thought of as a sound level of 55, so it's a
5 lot louder than the sound levels that you're asking
6 about.

7 Q. Okay. The report -- or at least the
8 power point talks about modeling results show project
9 operations will successfully comply with the IPCB
10 noise regulations. My question is, is there a
11 separate sound requirement when it comes to
12 construction activity?

13 A. No, there's not. Construction is the
14 exception to the IPCB noise regulations.

15 Q. Meaning -- meaning what for the benefit
16 of the committee here?

17 A. There are no numerical decibel limits
18 applicable to construction.

19 Q. Okay. And then are you able to do
20 post-construction -- a post-construction study of
21 sound?

22 A. I'm certainly able to. I've done a
23 number of those types of studies on various projects,
24 yes.

1 Q. And have you done them in relation to
2 solar projects?

3 A. So solar projects, no, I have not yet.

4 Q. Okay.

5 MR. KEYT: That's all the questions I
6 have.

7 MR. KAINS: Thank you, Mr. Keyt.
8 Redirect.

9 MS. KENNEDY: None.

10 MR. KAINS: Okay. Very good. Final
11 questions for this witness come from the committee
12 members.

13 All right. Very good. Thank you,
14 Ms. Pellerin, for your testimony. You're excused.

15 THE WITNESS: Thank you.

16 (Witness excused.)

17 MR. KAINS: All right. Seven witnesses
18 down three to go, right, Ms. Kennedy?

19 MS. KENNEDY: Yes.

20 MR. KAINS: All right. Very good.

21 Now it is time for us to determine a hearing
22 date for the conclusion of testimony. There will be
23 three more witnesses for the applicant, then there
24 will be -- I will allow testimony from any persons in

1 support of the application, and then there will be
2 testimony from persons who are opposed to the
3 application and there will be testimony from persons
4 who are neutral on the application. So we still have
5 a ways to go. I think it will be -- Mr. Chairman, it
6 would either be probably either one full day or two
7 evenings, what is -- I guess I'll open this up to any
8 member of the committee, what is the preference for
9 daytime versus evening sessions of this public
10 hearing?

11 MR. GREENWELL: Daytime.

12 MR. KAINS: Daytime works for you?

13 MR. ELMORE: Yep.

14 MR. KAINS: Okay. All right. Then we
15 probably only need one more day to complete testimony,
16 closing statements, public comment, but I don't think
17 there will be enough time for committee deliberations.
18 So I think we're going to need one full day in
19 January, the second week of January, specifically, and
20 then there will have to be another session where the
21 board debates this, deliberations in open -- open
22 court, if you will, or in open forum.

23 So first let's find a date that is available
24 that you all are available. I have -- the single most

1 important person is the court reporter Jamie and she
2 is available during the week of January 8th, I hope
3 I'm not embarrassing you, but without you this can't
4 happen. January 8th Jamie is available and
5 Ms. Kennedy during a break gave me a piece of paper
6 that says all of she and all of her witnesses are
7 available Monday the 8th, Wednesday the 10th, Thursday
8 the 11th and Friday the 12th all in January. That
9 leaves you the members of the committee.

10 Mr. Keyt, you're free, aren't you?

11 MR. KEYT: Sort of.

12 MR. KAINS: Sort of.

13 MR. KEYT: I'm not free -- I don't think
14 I'll be free the 8th. The room is available the 10th
15 and 11th.

16 MR. KAINS: The room -- that's something
17 else we need, we have to have the room.

18 Okay. 10th and 11th look like good days.
19 All right. Gentlemen on the committee, how does
20 daytime starting at 9 a.m., and going until we finish
21 on Wednesday, January 10th look?

22 MR. PUZEY: Good.

23 MR. ELMORE: Good.

24 MR. GREENWELL: Good.

1 MR. KAINS: Russ?

2 MR. RUDD: Okay.

3 MR. KAINS: All right. How about
4 Thursday, January 11th?

5 MR. PUZEY: Still good.

6 MR. GREENWELL: I have a meeting that
7 sometimes gets cancelled on Thursday morning, so I
8 better not do Thursday then.

9 MR. KAINS: Okay. So Wednesday is
10 better for you, Mr. Greenwell?

11 MR. GREENWELL: Yeah.

12 MR. KAINS: Okay. All right. It's not
13 a public hearing unless I hear from the public. Is
14 there anybody here who really wants to be here for a
15 second day of this hearing and can you all be here on
16 Wednesday, January 10th? I see heads nodding
17 affirmatively.

18 Mr. Chairman, we will schedule notice to be
19 sent -- Andy, does it require notice?

20 MR. KEYT: It doesn't require a separate
21 notice in terms of publication in the newspaper or
22 other notice, but we will likely post a separate
23 notice just because there's so much time elapse
24 between now and then. So we'll probably post a

1 separate newspaper, it's already mailed.

2 MR. KAINS: Okay. Very good. All
3 right. Then we will resume this hearing,
4 Mr. Chairman, if it's all right with you Wednesday,
5 January 10, 2024, at 9 a.m.

6 MR. FOUREZ: That works.

7 MR. KAINS: That works. All right.

8 I don't think we need a motion on that, do
9 we, Andy?

10 MR. KEYT: You do not.

11 MR. KAINS: All right. Very good. Then
12 this hearing shall be in recess until Wednesday,
13 January 10, 2024, at 9:00 a.m.

14 And I would just caution each and every
15 person in this room that while we are in the middle of
16 this hearing, and we will be in the middle of this
17 hearing until January 10, I will ask that people
18 refrain from lobbying members of the committee either
19 way, just don't talk to them about it, and I've told
20 members of the committee when I met with them a couple
21 weeks ago people try to talk to you about this
22 right -- we're right smack dab in the middle of a
23 hearing and so there is to be no discussion about the
24 relative merits of the application, good, bad or

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otherwise. So no discussion with members of the committee just out of fairness to everyone.

All right. With that, Mr. Chairman.

MR. FOUREZ: We stand in recess.

MR. KAINS: We stand in recess, yes, sir. And Merry Christmas to everybody.

(Cause adjourned.)

WHICH WERE ALL THE PROCEEDINGS MADE OF RECORD IN THIS CAUSE ON SAID DAY.

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C E R T I F I C A T E

I, Jamie S. Atkinson, Official Court Reporter
in and for the County of Vermilion, State of Illinois,
do hereby certify that the foregoing to be a true and
accurate transcript of the proceedings had in the
before-entitled cause on said day.

Dated this 3rd day of January, 2024.



Jamie S. Atkinson, CSR
Official Court Reporter
License No. 084-004156