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STATE OF MISSOURI
PUBLIC SERVICE COMMISSION
TRANSCRIPT OF PROCEEDINGS
Evidentiary Hearing
March 24, 2017
Missouri Public Service Commission
At Jefferson City
Volume 18
In The Matter of the ) Application Of Grain Belt )
Express Clean Line LLC for a) Certificate of Convenience ) and Necessity Authorizing it) to Construct, Own, Operate, )
Control, Manage, and )
    Maintain a High Voltage, ) File No. EA-2016-0358
    Direct Current Transmission )
    Line and an Associated )
    Converter Station Providing )
    an interconnection on The )
    Maywood-Montgomery 345 kV )
    Transmission Line.
        MICHAEL BUSHMANN, Presiding
    SENIOR REGULATORY LAW JUDGE
        SCOTT T. RUPP
        MAIDA J. COLEMAN
            COMMISSIONERS
        REPORTED BY:
        AMANDA N. FARRAR, CCR
        MIDWEST LITIGATION SERVICES
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For the International Brotherhood of Electrical Workers Local Union 2 and Local Union 53:

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| 1 | P R O C E E D I N G S |
| :---: | :---: |
| 2 | (The hearing commenced at 8:30 a.m.) |
| 3 | JUDGE BUSHMANN: Let's go on the record. |
| 4 | Good morning. Today is March 24th, |
| 5 | 2017. It is, hopefully, the final day of the |
| 6 | evidentiary hearing in File No. EA-2016-0358. |
| 7 | At this point, we're ready for the final |
| 8 | two staff witnesses. |
| 9 | MS. ASLIN: Judge, Casi Aslin for Staff |
| 10 | calls Kathleen McNelis. |
| 11 | JUDGE BUSHMANN: Do you solemnly swear |
| 12 | or affirm that the testimony you're about to give |
| 13 | will be the truth? |
| 14 | THE WITNESS: I do. |
| 15 | JUDGE BUSHMANN: Thank you. |
| 16 | KATHLEEN McNELIS, |
| 17 | having been called as a witness herein, having been |
| 18 | first duly sworn, was examined and testified as |
| 19 | follows: |
| 20 | DIRECT EXAMINATION |
| 21 | BY MS. ASLIN |
| 22 | Q. Could you, please, state and spell your |
| 23 | name for the record. |
| 24 | A. It's Kathleen A. McNelis. |
| 25 | $\mathrm{K}-\mathrm{A}-\mathrm{T}-\mathrm{H}-\mathrm{L}-\mathrm{E}-\mathrm{E}-\mathrm{N}, \mathrm{A}, \mathrm{M}$, $\mathrm{C}-\mathrm{N}-\mathrm{E}-\mathrm{L}-\mathrm{I}-\mathrm{S}$. |

## MIDWEST LITIGATION SERVICES

Q. And where are you employed and in what capacity?
A. On the staff of the Missouri Public Service Commission. I'm a utility regulatory engineering manager.
Q. And are you the same Kathleen McNelis who prepared or caused to be prepared portions of Staff's rebuttal report that has been marked as Exhibit 201?
A. Yes.
Q. Do you have anything you wish to correct in that testimony?
A. No.
Q. And with that in mind, if you prepared that testimony today, would it be the same?
A. Yes.
Q. Is the information in that document true and correct to the best of your belief and knowledge?
A. Yes.

MS. ASLIN: Your Honor, Staff tenders
Ms. McNelis for cross.
JUDGE BUSHMANN: First Cross would be
Missouri Landowners.
MR. AGATHEN: No questions.

JUDGE BUSHMANN: Show Me Landowners?
MR. LINTON: No questions, Judge.
JUDGE BUSHMANN: Rockies Express?
MS. GIBONEY: No questions, Judge.
JUDGE BUSHMANN: MIEC?
MR. MILLS: No questions.
JUDGE BUSHMANN: Wal-Mart?
MR. WOODSMALL: No questions. Thank
you.
JUDGE BUSHMANN: Infinity Wind Power?
MS. PEMBERTON: No questions.
JUDGE BUSHMANN: Wind on the Wires?
MR. BRADY: No questions.
JUDGE BUSHMANN: MJMEUC?
MS. WHIPPLE: No questions, Judge.
JUDGE BUSHMANN: Grain Belt Express?
MR. ZOBRIST: No questions, Judge. JUDGE BUSHMANN: And $I$ don't have any.

No need for Redirect.
Thank you. You may step down. MR. JOHNSON: Staff calls Robert

Schallenberg.
JUDGE BUSHMANN: Do you solemnly swear or affirm that the testimony you're about to give will be the truth?

THE WITNESS: Yes.
JUDGE BUSHMANN: Thank you.
ROBERT SCHALLENBERG,
having been called as a witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION
BY MR. JOHNSON
Q. Could you, please, state your name for the record and spell it for the court reporter.
A. Robert Schallenberg. The last name is $S-C-H-A-L-L-E-N-B-E-R-G$.
Q. And where are you employed -- oh, excuse me. I'm sorry. I'm Mark Johnson.

And where are you employed and in what capacity?
A. I'm employed by the Missouri Public Service Commission and my current title is manager of operational analysis.
Q. And did you cause to be prepared or prepare portions of the staff rebuttal report that's been marked as exhibit -- as Staff Exhibit No. 201, both NP and HC?
A. I did prepare -- did prepare that. I'm not -- I'm not sure of the numbers and stuff, but

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I'll accept the numbers you have given me.
    Q. And at the time of -- the time you
    offered that testimony, was your testimony true and
    correct to the best of your knowledge and belief?
    A. Yes.
    Q. And since the filing of Staff report's,
have you had any reason to make any updates to your
testimony?
    A. Yes. The topic is changing. It changes
    daily and, so, I have done an update and I have been
    able to incorporate the number that's in the
    Commission's electronic filing information service,
    the number of public comments to the number I was
    creating on a matrix.
    Q. And just to -- just to be perfectly
clear, the portion of the report you authored was
titled summary of public comments?
    A. Yes.
        MR. JOHNSON: Judge, at this time I
    would ask to have an exhibit marked. I believe we
    are on Staff Exhibit No. 207.
            JUDGE BUSHMANN: That's correct.
            MR. JOHNSON: Mr. Schallenberg, I'm
        handing you what's been marked as Staff Exhibit
        No. 207.
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Q. (By Mr. Johnson) Could you, please, identify this document.
A. This is the section of the Staff's rebuttal report on public comments that was filed at that time and this is an update as of Monday as to the public comm -- the status of public comments that we had -- that we've received as of that date.
Q. And generally, what updates have you made to your testimony?
A. I've updated the number of public comments we've received and I've updated the ratios of how many of the comments we received that indicated either that supported the application being adopted or opposed it. I've updated those percentages through Monday's numbers.
Q. And is this updated testimony true and correct to the best of your knowledge and belief?
A. It is.

MR. JOHNSON: Judge, at this time I move to admit Staff Exhibit No. 207. And as Mr. Schallenberg is the final staff witness, I also move to admit Staff Exhibit No. 201, both NP and HC.
(Staff's Exhibit 201-NP, 201-HC, and 207 were offered into the record.)

JUDGE BUSHMANN: Any objections?


MS. PEMBERTON: No questions.
JUDGE BUSHMANN: Wind on the Wires?
MR. BRADY: No questions, Your Honor.
JUDGE BUSHMANN: MJMEUC?
MS. WHIPPLE: No questions, Your Honor.
JUDGE BUSHMANN: Grain Belt Express?
MR. ZOBRIST: Just a few. Karl Zobrist
on behalf of Grain Belt Express.
CROSS-EXAMINATION
BY MR. ZOBRIST
Q. Mr. Schallenberg, when you said you updated these numbers as of Monday, that's March 20th, 2017?
A. Yes.
Q. And the current tally is that there are 53 percent of the commenters who have submitted comments to the Commission's EFIS site, 53 percent were in support, correct?
A. Yes. That's, that's 53 percent of the public comments that expressed a position, not all public comments. Some public comments were neutral.
Q. But 53 percent of the comments received did support the application?
A. 53 percent of the comments that expressed a position regarding the application.

1 Not -- there are public comments that we received that aren't in this count because, for example, some people asked for public hearings in eight counties that didn't express a position whether they supported. That isn't in that percentage because it didn't...
Q. So, of the number who did express an opinion, 53 percent supported the application?
A. Yes.
Q. Okay. Thank you. MR. ZOBRIST: Nothing further, Judge. JUDGE BUSHMANN: Redirect by Staff? MR. JOHNSON: No re -- no redirect. Thank you, Judge.

JUDGE BUSHMANN: Thank you,
Mr. Schallenberg. You may step down.
Is counsel for IBEW here? Why don't we take your witness now. And since this is your first appearance, you'll need to make an entry of appearance for the record.

MS. PEREZ: Good morning. I'm Emily
Perez. I'm with Hammond \& Shinners in St. Louis representing the International Brotherhood of Electrical Workers, Locals 52 -- 53 and 2, collectively known as the unions or IBEW unions.

The unions call Stephen White.
JUDGE BUSHMANN: Do you solemnly swear or affirm that the testimony you're about to give will be the truth?

THE WITNESS: Yes.
JUDGE BUSHMANN: Please be seated. STEPHEN WHITE, having been called as a witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION
BY MS. PEREZ
Q. Can you state and spell your name for the record, please.
A. Stephen White. S-T-E-P-H-E-N W-H-I-T-E.
Q. And, Mr. White, by whom are you
employed?
A. I'm employed by International

Brotherhood of Electrical Workers Local No. 53.
Q. And what is your position?
A. Business manager.
Q. Did you previous -- previously file or cause to be filed rebuttal testimony in this case?
A. Yes.
Q. If you -- I'm sorry. If you were to


MR. BRADY: No questions, Your Honor. JUDGE BUSHMANN: Infinity Wind Power?

MS. PEMBERTON: No questions.
JUDGE BUSHMANN: Wal-Mart?
MR. WOODSMALL: No questions.
JUDGE BUSHMANN: MIEC?
MR. MILLS: No questions.
JUDGE BUSHMANN: Commission staff?
MS. ASLIN: No questions, Judge.
JUDGE BUSHMANN: Rockies Express?
MS. GIBONEY: No questions, Judge.
JUDGE BUSHMANN: Show Me Landowners?
MR. LINTON: No questions.
JUDGE BUSHMANN: Missouri Landowners?
MR. AGATHEN: Yes, Your Honor. Thank
you.
CROSS-EXAMINATION
BY MR. AGATHEN
Q. Good morning, Mr. White.
A. Good morning.
Q. My name is Paul Agathen. I represent the Missouri Landowners Association.

On page 1 of your testimony, you mention that you represent a coalition of IBEW workers which includes Locals 2 and 53, correct?
A. Correct.
Q. In the last case the IBEW coalition also had Local 14 -- excuse me, Local 1439; is that correct?
A. Correct.
Q. And they dropped out of your coalition?
A. That is correct.
Q. Did someone from Grain Belt make contact with you or your representatives about intervening in this case?
A. Yes.
Q. And before you intervened, did Grain Belt explain to you that their project would displace generation from virtually every coal-fired plant in the state of Missouri?
A. No.
Q. Did they mention that the megawatt output from the Grain Belt project would be equal to the equivalent of about five baseload coal-fired plants?
A. No.
Q. Approximately how many full-time IBEW members are employed at a typical baseload coal-fired plant in Missouri?
A. We represent two large coal-fired plants
in Missouri and I believe I averaged those numbers at about 142 per, per plant.
Q. The number of people employed at any given plant depends in part on the generation that plant will produce, does it not?
A. It does, yes.
Q. How much generation at one of these plants can be displaced by renewable energy before some women and men will no longer be needed at the plant?
A. I wouldn't have the exact number of megawatts that would displace workers. I'm just not sure.
Q. There would be some number, though?
A. There would be some number that could overtake a coal-fired plant I would assume, yes.
Q. The power plant workers at Ameren are represented by Local 148; is that correct?
A. That I'm not sure of.
Q. They're represented by a different local, though?
A. I would think so, yes.
Q. Did you contact the business manager at that local which represents the power plant workers at Ameren?

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3 whatever, is not a part of your coalition, is it?
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A. No.
Q. That local, whatever it is, 148 or
A. No, sir.
Q. Are you familiar at all with the testimony from the last case by Mr. David Desmond? A. Yes.
Q. Your testimony is similar in a lot of ways to his, but there's some major changes, though, are there not?
A. I'm not aware of what the major changes would be, no.
Q. He testified that Grain Belt will need approximately 1,000 workers to build the transmission line in Missouri and you say the number is 1,500 . Do you know what the difference accounts for?
A. Well, it's kind of hard to project that, but if you look at the total project, you're looking at line clearance, tree trimming, vendors that construct wire and parts to build this transmission line. So, it's just a rough guesstimate. It could be 1,200.
Q. My question is: Why did it go from 1,500 to 1,000 ?

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    A. We had conversed about right-of-way
    clearance and I'm not sure that when he testified
    that was included in his, his testimony to. There's
    a lot of prework that goes out to clear foliage,
    gate repair, farm use, stuff like that.
    Q. So, the numbers all depend on what you
    define as being included or excluded?
    A. Yes.
    Q. Were you given those job numbers by
    Grain Belt?
    A. No.
    Q. By whom?
    A. Dave and I had conversed about what we
    thought an average transmission project would look
    like, size and duration. Dave Desmond.
    Q. Did Grain Belt mention to you the
        billions of dollars in federal tax credits that
        would be given to the wind farm generators?
    A. No.
    Q. Did they discuss with you the potential
    loss of jobs which might result from their line
        being built?
            A. No.
            Q. Did they mention that if the Grain Belt
        line is built, there may be fewer other transmission
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lines built in Missouri?
    A. No.
    Q. And fewer transmission upgrades?
    A. No.
    Q. And new generating facilities?
    A. No.
    Q. These are all jobs that would likely go
to IBEW workers, would they not?
    A. Possibly, yes.
        MR. AGATHEN: That's all I have, Judge.
        Thank you, Mr. White.
        THE WITNESS: Thank you.
        JUDGE BUSHMANN: Redirect?
            REDIRECT EXAMINATION
        BY MS. PEREZ
            Q. Mr. White, do any of the questions posed
by Mr. Agathen cause you to rethink or change the
    testimony that you filed in this case?
    A. No, not to change my testimony, but I
    did have a comment regarding, I think, the Ameren
    power plant that he, he mentioned. If I could
    address the Commission?
    MS. PEREZ: Your Honor?
    JUDGE BUSHMANN: If you want to, that's
    fine.
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THE WITNESS: Just a quick one-two.
We represent power plant workers at the Thomas Hill and New Madrid Power Plants, they're approximately 1,200 megawatts, and I did have a conversation with the general manager to see if such a project would affect his, pardon me, baseload coal, excuse me, production in Missouri and the answer was no. So, that was my looking at will this affect our coal-fired power plants that we deal with directly, manpower issues, so...

MS. PEREZ: I have no further redirect. JUDGE BUSHMANN: Mr. White, that completes your testimony, sir. You may step down. THE WITNESS: Thank you. MS. PEREZ: Your Honor, may the IBEW Unions be excused from the remainder of the hearing? JUDGE BUSHMANN: You may. MS. PEREZ: Thank you.

JUDGE BUSHMANN: Mr. Chriss is the next test -- next witness to testify, and I see he's testifying by telephone. So, in order to get that set up, we'll take a short recess and be off the record for about five minutes.
(A short recess was taken.)
JUDGE BUSHMANN: All right. We're back

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    on the record and ready for the Wal-Mart witness.
    MR. WOODSMALL: Good morning, sir.
    Would you state your name for the record.
        THE WITNESS: My name is Steve W.
    Chriss. Last name is spelled C-H-R-I-S-S.
    JUDGE BUSHMANN: Mr. Chriss --
    MR. WOODSMALL: Oh, I'm sorry.
    JUDGE BUSHMANN: Mr. Chriss, before we
    go any further, do you solemnly swear or affirm that
    the testimony you're about to give will be the
    truth?
        THE WITNESS: I do.
        JUDGE BUSHMANN: You may proceed.
        MR. WOODSMALL: Thank you.
        By the way, this is Dave Woodsmall on
    behalf of Wal-Mart.
                        STEVE CHRISS,
    having been called as a witness herein, having been
        first duly sworn, was examined and testified as
                                    follows:
                                    DIRECT EXAMINATION
    BY MR. WOODSMALL
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    Q. And would you state your title and by
    whom you're employed.
    A. I am director energy and strategy
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analysis for Wal-Mart Stores, Incorporated.
    Q. And did you cause to be filed what has
marked as Exhibit 900, your rebuttal testimony?
    A. Yes.
    Q. And is the information contained in
there true and accurate to the best of your
knowledge, information, and belief?
    A. Yes.
    Q. And if I were to ask you those same
questions today, would you have any changes?
    A. No.
    MR. WOODSMALL: With that, Your Honor, I
would offer Exhibit 900, and tender the witness for
    cross-examination.
    (Wal-Mart's Exhibit 900 was offered into
the record.)
    JUDGE BUSHMANN: Are there any
    objections?
                            Hearing none. That exhibit is received
    into the record.
    (Wal-Mart's Exhibit 900 was received
    into the record.)
    JUDGE BUSHMANN: And first
    cross-examination would be by Grain Belt Express.
    MR. ZOBRIST: No questions, Judge.
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| 1 | JUDGE BUSHMANN: MJMEUC? |
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| 2 | MS. WHIPPLE: None, Your Honor. |
| 3 | JUDGE BUSHMANN: Wind on the Wires? |
| 4 | MR. BRADY: No questions. |
| 5 | JUDGE BUSHMANN: Infinity Wind? |
| 6 | MS. PEMBERTON: No questions. |
| 7 | JUDGE BUSHMANN: MIEC? |
| 8 | MR. MILLS: No questions. |
| 9 | JUDGE BUSHMANN: Commission staff? |
| 10 | MS. ASLIN: No questions, Judge. |
| 11 | JUDGE BUSHMANN: Rockies Express? |
| 12 | MS. GIBONEY: No questions, Judge. |
| 13 | JUDGE BUSHMANN: Show Me Landowners? |
| 14 | MR. LINTON: No questions. |
| 15 | JUDGE BUSHMANN: Missouri Landowners? |
| 16 | MR. AGATHEN: Yes, Judge. Thank you. |
| 17 | CROSS-EXAMINATION |
| 18 | BY MR. AGATHEN |
| 19 | Q. Good morning, Mr. Chriss. |
| 20 | A. Good morning. |
| 21 | Q. Can you hear me all right? |
| 22 | A. I can. |
| 23 | Q. My name is Paul Agathen. I represent |
| 24 | the Missouri Landowners Alliance. |
| 25 | You're testifying here today on behalf |

of Wal-Mart stores; is that correct?
A. That's correct.
Q. And you're speaking for Wal-Mart here
today?
A. I am.
Q. And Wal-Mart is supporting the
construction of the proposed line; is that correct?
A. So, our testimony specifically -- let me
go to my recommendations. One second.
Our recommendation is that the
Commission should find that Grain Belt Express meets
the first and fifth Tartan criteria. That's our
position on this docket.
Q. So, are you supporting them or not
supporting them or are you taking a neutral position
here?
A. We are generally supportive. However,
just given the structure of the docket in terms of
our recommendations, we have focused on the first,
first and fifth criteria.
Q. Understood.
The Grain Belt line would go through
eight mostly rural counties in northern Missouri; is
that correct?
A. I'm not familiar with the route

1 specifically.
Q. Which of those counties did you visit in conjunction with your testimony here?
A. I have not performed any visits in conjunction with my testimony.
Q. In none of those eight counties?
A. I have -- I have not performed any visits in conjunction with my testimony.
Q. How many Wal-Mart stores are located in the eight counties where the line's supposed to be built?
A. I don't know. I don't have that information with me.
Q. However many there are, those stores are there by virtue of the people who live and work in the area there, are they not?
A. Ultimately, stores are constructed in order to meet customer demands and provide service to customers.
Q. So, the answer would be yes?
A. Generally.
Q. Did anyone from Grain Belt tell you about their telephone survey which showed that the line is opposed in six of the eight counties where it's supposed to be built?

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A. Not to my recollection.
Q. Would Wal-Mart still be behind the proposed line if they had been told that more people who live there oppose the line than support it?
A. Generally, we're supportive of efforts to bring renewables into markets. We'd look at data we thought, but I think we would have ended up in the same place.
Q. Did you attend any of the eight local public hearings which the Commission held in the eight counties where the line is to be built?
A. No.
Q. To your knowledge, did any representative of Wal-Mart stores attend any of those eight local public hearings?
A. Not to my knowledge.
Q. Does Wal-Mart even care what the people think about the line who live and work there?
A. I mean, we certainly care and it's the Commission's role in this docket in order to balance the interests of all parties involved.
Q. Well, how can you care what they think when you don't know what they said?

MR. ZOBRIST: Objection; argumentative. JUDGE BUSHMANN: Overruled.

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A. Can you repeat the question, please?
Q. (By Mr. Agathen) Sure. You say you care what the people who live and work there think about the line, but you don't know what they said about what they think about the line; is that correct?
A. That's correct.
Q. What did Mr. Pence have to say about the problems the line would cause?
A. I don't know who Mr. Pence is.
Q. What did Mr. Edwards have to say about the Grain Belt line?
A. I don't know who Mr. Edwards is.
Q. But you did manage to read the Grain Belt testimony, right?
A. I did read that.
Q. Have you seen the exhibit in this case of what the Grain Belt line will actually look like as it crosses through northern Missouri?

MR. ZOBRIST: Well, objection, Judge.
That mischaracterizes that document that was attached to Mr. Nordstrom's testimony, which he did not prepare. So, that mischaracterizes what came into evidence with Mr. Nordstrom's testimony.

MR. AGATHEN: I don't believe that's accurate, Your Honor. I think it depicts what the

1 line will look like as it goes through northern
2 Missouri.

JUDGE BUSHMANN: Overruled.

You may answer the question, Mr. Chriss.
A. I don't recall it offhand. If you can point me to it, $I$ can look at it.
Q. (By Mr. Agathen) Well, do you fully support the construction of the line, despite the impact on the landscape that it would create in northern Missouri?
A. Could you ask your question again, please?
Q. Do you fully support the construction of the line, despite the impact that the line will have on the landscape as it crosses through northern Missouri?
A. As I said, we generally support the construction of the line.
Q. Regardless of its impact on the landscape?
A. Ultimately, between -- again, the Commission is in the position to weigh the interests of all the parties in the docket. The Grain Belt Express and Clean Line are in position to mitigate and optimize the use of land. And so, to the extent

1 that the Commission believes that Clean Line and
2 Grain Belt Express will do that, then, you know, we

3 support what the -- again, would support the Commission's findings on that.
Q. Regardless of the impact that it would have on the land?
A. Ultimately, all infrastructure projects have some impact. The key is to minimize and offset the impacts as far as possible.
Q. Well, I don't think you've answered the question yet. Does Wal-Mart fully support the line, even though it means that it's going to have an impact on the landscape as it goes through northern Missouri?
A. We're not changing our position off of what's in testimony. So, I would imagine that's a yes.
Q. But you hadn't seen that picture that we're talking about, had you?
A. I don't recall it.
Q. And Wal-Mart -- or does Wal-Mart fully support the line, even though it means that private property of many people in rural Missouri will be condemned against their will?

MR. WOODSMALL: Your Honor, I'm going to

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object just to the point that his question says
    "fully support." As Mr. Chriss said initially, his
    testimony, Wal-Mart's position is just that this
    project meets the two criteria of the Tartan
    standards. So, fully support, I believe,
mischaracterizes Wal-Mart's position.
    JUDGE BUSHMANN: All right. I agree.
    MR. AGATHEN: Well, he backed off of
    that, though, and said they do support the line.
    JUDGE BUSHMANN: I agree with
Mr. Woodsmall. That is a mischaracterization.
    MR. AGATHEN: Let me try it this way,
    Your Honor.
Q. (By Mr. Agathen) Does Wal-Mart support the line, even though it means that private property of many people in rural Missouri will be condemned against their will?
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MR. ZOBRIST: Objection; calls for speculation.

JUDGE BUSHMANN: Overruled.
Mr. Chriss, if you have an answer, you may answer, or if you need the question repeated.
A. Let's repeat it one more time, please.
Q. (By Mr. Agathen) Does Wal-Mart support the line, even though it means that private property

1 of many people in rural Missouri will be condemned against their will?
A. I think ultimately it is responsibility of the applicant to responsibly deal and arrange the acquisition of land and so -- and again, you know, going back to the Commission's jurisdiction and authority in this case, to the extent that the Commission is comfortable with the applicant's plan to acquire land for the project, you know, we're generally supportive.
Q. And Wal-Mart supports the line, even if it means that property adjacent to the right-of-way will decline in value and that the landowners will receive no compensation for that loss?

MR. WOODSMALL: Your Honor, I'd object to the extent it's speculative regarding the value, the loss of value for adjacent land.

MR. AGATHEN: There is evidence in the record, Your Honor, that the land adjacent to the right-of-way will be devalued.

MR. WOODSMALL: But you haven't asked if Mr. Chriss is aware of any such value or loss of value.

JUDGE BUSHMANN: I'll overrule the objection.

Can you repeat the question, please? MR. AGATHEN: Sure.
Q. (By Mr. Agathen) Wal-Mart fully supports the line, even if it means that property adjacent to the right-of-way will decline in value and that the landowners will receive no compensation for that loss?

MR. WOODSMALL: Your Honor, again, I'd object on the basis of "fully supports".

MR. AGATHEN: I thought I took out the word "fully."

JUDGE BUSHMANN: Mr. Chriss, Mr. Chriss, do you understand the question?

THE WITNESS: I do.
A. And ultimately, you know, it's the same answer as the previous question where, you know, we have an expectation that the applicant work in the best interest of all parties involved to acquire land and that the Commission balances the interest of all parties in this docket.
Q. (By Mr. Agathen) Well, you didn't answer the question, though.

Does Wal-Mart still support the line, even if it means that the property adjacent to the right-of-way will decline in value?
A. So again, to the extent that the
applicant responsibly goes through the land
acquisition process and the Commission finds that it balances the interests of all parties to go forward, then, yes, we generally support the line.
Q. Do you know what a county commission is in Missouri?
A. I have a general knowledge.
Q. Does Wal-Mart care what the eight county commissions think about this project?
A. I believe we do.
Q. And what do they currently think about this project?
A. Can you point me to testimony?
Q. No, sir. I'm asking you what the eight county commissions currently think about the project. You said you care what they think. Now I'm asking you what do they think.
A. I don't know what they think.
Q. But you care what they think?

Did you make any inquiry as to what the county commissions think?
A. We did not.
Q. On a different subject, could you turn, please, to page 8 of your rebuttal testimony.
A. I'm there.
Q. Beginning at line 9, you state that many businesses have renewable energy goals, correct?
A. That's correct.
Q. And that increasing the availability of renewable power in Missouri can attract new businesses into the state, correct?
A. That's correct.
Q. In your opinion, is it fair to say that Wal-Mart is near the forefront of businesses that are interested in renewable energy?
A. Did you say forefront?
Q. Yes. Near the forefront.
A. Yes.
Q. Could you list for me all of the cases where a decision to locate or relocate a Wal-Mart facility anywhere in the country was determined on the basis of whether or not Wal-Mart could secure a supply of renewable energy for some or all of its electrical power needs?
A. There are no specific cases. However, we spend a good deal of time advocating for the increase in access to renewable energy both in terms of access to large-scale resources, as well as the ability to do renewable energy projects on-site.
Q. But $I$ think at the beginning you said you're not aware of any such instance; is that correct?
A. That's correct.
Q. Could you turn, please, to page 9 of your rebuttal testimony.
A. Okay.
Q. Beginning at line 2 you say that not only will the Grain Belt line allow the delivery of 500 megawatts of renewable energy into Missouri, but it will also allow for the delivery of 500 megawatts of energy from Missouri into the PJM area. Is that generally correct?
A. That's correct.
Q. Okay. Let me go back now to page 6. Beginning at line 3, you say the proposed line will be capable of delivering 3,500 megawatts of power from Kansas to the PJM area, correct?
A. That's my understanding, yes.
Q. And there you say at line 4 that in addition to that 3,500 megawatts, the line would allow for the delivery of 500 megawatts from Missouri to PJM, correct?
A. Yes, that's my understanding of their proposal.
Q. For a total of 4,000 megawatts into PJM?
A. That's my understanding.
Q. And who told you that that substation, Sullivan substation in PJM, would be capable of taking 4,000 megawatts of power?
A. Again, that's my understanding from the applicant's filing.
Q. Okay. So, back to page 9, beginning at line 4, you say that the Missouri to PJM service will allow Ameren to make greater off-system sales into PJM, correct?
A. Yes, that's my understanding.
Q. Are you aware of the fact that based on the evidence in this case, Ameren has shown no interest in buying capacity on the Grain Belt line?
A. That's my general understanding.
Q. To your knowledge, in the recent past what percentage of Ameren Missouri's off-system sales have been from fossil fire generation versus renewable?
A. I don't know the specific number, but I would imagine it's a significant percentage.
Q. So, a significant percentage of these off-system sales into PJM would be from fossil units, correct?
A. That is my general understanding. MR. AGATHEN: Your Honor, I have just a few more questions, but they deal with highly confidential material as marked by Wal-Mart.

JUDGE BUSHMANN: All right. We'll go in camera then, be in closed session. Those in the audience who are not authorized to listen to highly confidential information will need to step outside for a minute.
(REPORTER'S NOTE: At this point, an
in-camera session was held, which is contained in
Volume 19, Page 1421 through 1423.)

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(REPORTER'S NOTE: The proceedings
resumed in open session.)
JUDGE BUSHMANN: We're back in open
session.
Questions from Commission? (No
response.)
We're ready for redirect by Wal-Mart.
MR. WOODSMALL: Yes. One question, Your
Honor.
REDIRECT EXAMINATION
BY MR. WOODSMALL
Q. You were asked a highly-confidential question, and $I$ don't intend to get into highly-confidential information, about the number of megawatts purchased in MISO by Texas Retail Energy and the amount of it that was -- that was renewable energy. Would the Grain Belt Express project allow for a greater amount of that to be renewable energy?
A. It could.

MR. WOODSMALL: Thank you. No further
questions, Your Honor.
JUDGE BUSHMANN: Mr. Chriss, that completes your testimony, sir. You may hang up now. Thank you.

THE WITNESS: Thank you.

JUDGE BUSHMANN: And I believe we are ready for the first Show Me witness.

MR. LINTON: Show Me calls Ron Calzone.
JUDGE BUSHMANN: Raise your right hand,
please. Do you solemnly swear or affirm that the testimony you're about to give will be the truth? THE WITNESS: I do.

JUDGE BUSHMANN: Thank you.
RON CALZONE,
having been called as a witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION
BY MR. LINTON
Q. State your name for the record.
A. My name is Ron Calzone, C-A-L-Z-O-N-E.
Q. And by whom are you employed?
A. I am employed by CZ Engineering. I am also am a cattle producer. So, I own and operate a cattle farm.
Q. You wear two hats?
A. Pardon?
Q. You wear two hats?
A. Actually, at least two.
Q. Have you before you what has been marked

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as Exhibit 401?
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as Exhibit 401?
A. Yes.
Q. And did you prepare that testimony for this case?
A. I did.
Q. Do you have any changes to make to that testimony?
A. I do not at this point.
Q. If I ask you those questions today, would your answers be the same?
A. They would.
Q. Do you believe that those questions and answers are true and accurate to the best of your knowledge and belief?
A. I do.
MR. LINTON: I offer the Exhibit 401
into evidence and tender the witness for
cross-examination.
(Show Me's Exhibit 401 was offered into the record.)
JUDGE BUSHMANN: Are there any
objections?
Hearing none. 401 is received.
(Show Me's Exhibit 401 was received into
the record.)

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JUDGE BUSHMANN: First cross would be Missouri Landowners.

MR. AGATHEN: I have no questions, Your
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    Honor.
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JUDGE BUSHMANN: Rockies Express?
MS. GIBONEY: No questions, Judge.
JUDGE BUSHMANN: Commission staff?
MS. ASLIN: No questions, Judge.
JUDGE BUSHMANN: MIEC?
MR. MILLS: No questions.
JUDGE BUSHMANN: Is Mr. Woodsmall here?
No.
Infinity Wind Power?
MS. PEMBERTON: No questions.
JUDGE BUSHMANN: Wind on the Wires?
MR. BRADY: No, thank you.
JUDGE BUSHMANN: MJMEUC?
MS. WHIPPLE: No questions, Your Honor.
JUDGE BUSHMANN: Grain Belt Express?
MR. HARDEN: No questions.
JUDGE BUSHMANN: Questions from
Commission? (No response.)
No need for redirect. Mr. Calzone, that completes your testimony. Thank you, sir. You may step down.

MR. LINTON: Show Me next calls Mr. Glen Justis.

JUDGE BUSHMANN: Do you solemnly swear or affirm that the testimony you're about to give will be the truth?

THE WITNESS: I do.
JUDGE BUSHMANN: You may proceed.
THE WITNESS: You okay on the mic?
JUDGE BUSHMANN: Excuse me?
THE WITNESS: Microphone okay?
JUDGE BUSHMANN: Yes.
GLEN JUSTIS,
having been called as a witness herein, having been
first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION
BY MR. LINTON
Q. State your name for the record.
A. My legal name is Paul Glenden Justis, Jr., spelled J-U-S-T-I-S. I'm commonly known by Glen Justis.
Q. And by whom are you employed?
A. I am self-employed under the firm Acclaim Strategies, LLC. It's a consulting firm.
Q. Now, you have before you what have been
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marked as Exhibits 400 proprietary, 405-HC.
A. One moment, please.
Yes.
Q. Did you prepare those pieces of
testimony for this case?
A. I did.
Q. Do you have any changes to make to those
pieces of testimony?
A. I do have some corrections I would like
to distribute. May I give those to you?
Q. Yeah.
JUDGE BUSHMANN: Why don't we mark those

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    as a separate exhibit.
        MR. LINTON: Yeah.
        JUDGE BUSHMANN: So, the next number
    would be 420.
    Q. (By Mr. Linton) Could you describe what
has been marked as Exhibit 420?
    A. Certainly. This, this is meant to be or
    this is a summary of the corrections I'd like to
make to my testimony. The --
    Q. And --
                            MR. ZOBRIST: Judge, I want to
        interrupt. This is a little bit more than an errata
        sheet.
Q. (By Mr. Linton) These are corrections that -- well, let me -- let me ask. Why did -- why have you made this, this exhibit?
A. Really for the sake of correctness and expediency. What led me to make these corrections, and really the first page is a summary and after that are simply the actually pages showing the corrections, occurred after, after reviewing Mr. Berry's surrebuttal testimony. In doing that, I rereviewed my analysis, determined that there were a few items from that surrebuttal that I agreed with and for sake of correctness and expediency, I decided to accept those and introduce those under my model.

MR. LINTON: The purpose of the exhibit
is just to streamline the cross-examination.
MR. ZOBRIST: Well Judge, I would need
to have at least a period of time to have these reviewed by Mr. Berry so I could consult with Mr. Berry, because I prepared my cross-examination based upon what has been prefiled by the testimony -- prefiled by the witness.

JUDGE BUSHMANN: It does seem that for matter of fairness -MR. LINTON: I have no objection --

JUDGE BUSHMANN: -- Grain Belt should have an opportunity to review these before having to cross Mr. --

MR. LINTON: I have no objection to that.

THE WITNESS: Could I make a general observation, sir?

JUDGE BUSHMANN: Okay.
THE WITNESS: What, what you will notice there in the top three items are items that \(I\) do agree with the items that Mr. Berry identified. And the very first line there where it reflects original values, those are the original values from my analysis. And kind of the last item under No. 4, which is in gray highlight, what you will notice is that by virtue of my corrections, the cost of Kansas wind delivered by Grain Belt Express is lowered. So, I guess my -- the point I'm trying to make is that these corrections are moving those results in favor of Grain Belt Express.

MR. ZOBRIST: Well, Judge, I am gratified to hear that, but I still need to have at least a few minutes to review this with Mr. Berry. JUDGE BUSHMANN: I agree. Why don't we -- Mr. Justis, why don't we put your testimony on

1 hold for a little bit, take some additional witnesses and we'll come back to you shortly when Mr. Zobrist has had an opportunity to review the information.

MR. BRADY: May I ask, Your Honor, though, first is it possible we could at least -- if there's any further description of what the changes were. I think I'd like to hear what those are before we take a break. So, that would -- might help us in reviewing, you know, expediting the review. Is that possible?

JUDGE BUSHMANN: Sure. Mr. Justis, if you could just -- if there's anything further that you wanted to add beyond what you just said, you can let us know that.

THE WITNESS: Sure.
MR. LINTON: Why don't you go line by line.

THE WITNESS: Why don't I just -- why don't I just kind of briefly walk you through this and then will that -- and then we can take that extra time.

MR. ZOBRIST: And Judge, I have no objection to that, but I'm just contemplating here on Friday morning whether fairness prevents these
changes at this late date regardless. I mean, I think the witness should go through it, but this just may be too late. We have no access to work papers. We have no ability except to take the witness's view of these changes and it puts us -JUDGE BUSHMANN: Sure.

MR. ZOBRIST: -- in a position where we can't effectively cross-examine him.

JUDGE BUSHMANN: Well, for now let's let
Mr. Justis describe them, we'll then sit him down and have some time for review and then we'll come back later and address that.

Go ahead, Mr. Justis.
THE WITNESS: Thank you, Judge.
So, as I mentioned before, the first
line item where it lists item zero, those are the original values for my levelized cost of energy analysis. In reviewing Mr. Berry's surrebuttal testimony, he identified three things that \(I\) do specifically agree with and, again, for correctness and expediency I'm just accepting those.

So, the first item was the transmission charger should have been applied consistently with how they were calculated, and Mr. Berry identified correctly that I'd calculated the transmission
charge based on net megawatt hours delivered, but then \(I\) had applied those based on gross megawatt hours, and that's correct. And as you can see, there's a resulting decrease in the -- in my estimate of the cost of Kansas wind delivered via Grain Belt Express.

The second item is is the fact that the cost of the smaller converter station in Missouri, I agree that will -- that converter station, because of the much smaller sizing of it, will be less expensive than the other two larger converter stations. Mr. Berry had indicated the value of 100 million versus 500 million and I've accepted that value.

Item No. 3 was the finding that the -in my analysis \(I\) had attempted to calculate the cost of new AC lines, should they be necessary to be built, for purposes of delivering additional Iowa or Missouri wind, and \(I\) had some errors in that which I have corrected.

The fourth item was as \(I\) was -- as I was working through Items 1 through 3, I also noticed Item 4 where I had assumed, assumed overbuild of 105 percent consistent with Mr. Berry's original model. I had applied that in my model against the
volume of megawatt hours which serves as the denominator to the LCOE analysis, but I had not applied that to the capital cost of that generation. So, that aligns those two models together. So, those are -- those are Items 1 through 4.

Item No. 2 also applied to the corrections I made when reanalyzing the project using Mr. Berry's model. So, for fairness I was simply trying to reintroduce that same Item No. 2 into my rerun of his model.

Now, with that, as I mentioned, then the subsequent pages are just simply what actually is changed in the narrative of my rebuttal testimony. So, the next page over, that value 29 percent used to say -- I think might have said 33 or something like that. By virtue of my recalculated LCOE estimates, Figure 3 is now changed and, again, you can see the cost of Kansas wind via GBX is now lower than it was in my original testimony.

The next page, which was page 13 of my rebuttal testimony, is when I updated Mr. Berry's model using that same Item No. 2 I referred to a moment ago, that new cost of Grain Belt via GBX was down to 94.54 in his model with my adjustments.

Page 14, again, is simply updating that
graph with my new values.
On page 16 is my updated cost estimate of the Grain Belt Express line itself, acknowledging the fact that the Missouri converter station would be less expensive than \(I\) had originally assumed and the value I have here is 3.18 billion. I think Mr. Berry had 3.19 billion if, you know, if he were to use my same estimate approach.

And the last sheet are -- basically is
my schedule PGJ-01 where I, in similar fashion, have simply updated the values that had changed.

So, to summarize, the first page is simply a summary of the changes. The remaining pages are where the actual testimony pages were changed.

MR. LINTON: Your Honor, with your
indulgence, then I'll just continue the foundation of the Exhibits 400 and 405-HC.

JUDGE BUSHMANN: Well, why don't we do that when Mr. Justis comes back --

MR. LINTON: Very well.
JUDGE BUSHMANN: -- and we can just take care of all of it at the same time.

For now, Mr. Justis, why don't you step down for now and then we'll come back to you later.

THE WITNESS: Thank you, Judge.
JUDGE BUSHMANN: I believe we're ready
for Mr. Turner; is that correct?
MR. LINTON: Right. Show Me calls John
Turner.
JUDGE BUSHMANN: Do you solemnly swear
or affirm that the testimony you're about to give
will be the truth?
THE WITNESS: I do.
JUDGE BUSHMANN: You may be seated. JOHN TURNER,
having been called as a witness herein, having been
first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION
BY MR. LINTON
Q. Good morning.
A. Good morning, sir.
Q. Please state your name for the record.
A. John Turner. J-O-H-N T-U-R-N-E-R.
Q. And can you state your employer.
A. I'm self-employed, retired.
Q. Have you caused to be prepared before you what has been marked as Exhibit 403?
A. Yes.
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            Q. Do you have any changes to make to that
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            Q. Do you have any changes to make to that
    testimony?
    testimony?
    A. None of substance.
    A. None of substance.
    Q. If I were to ask you those questions,
    Q. If I were to ask you those questions,
    would your answers be the same today?
    would your answers be the same today?
    A. Yes.
    A. Yes.
    Q. And is your testimony true and accurate
    Q. And is your testimony true and accurate
to the best of your knowledge and belief?
to the best of your knowledge and belief?
    A. Absolutely.
    A. Absolutely.
            MR. LINTON: I offer the testimony of
            MR. LINTON: I offer the testimony of
Mr. John Turner into evidence, and tender him for
Mr. John Turner into evidence, and tender him for
    cross-examination.
    cross-examination.
                            (Show Me's Exhibit 403 was offered into
                            (Show Me's Exhibit 403 was offered into
    the record.)
    the record.)
                            JUDGE BUSHMANN: Any objections to the
                            JUDGE BUSHMANN: Any objections to the
    receipt of Exhibit 403?
    receipt of Exhibit 403?
                            Hearing none. It is received into the
                            Hearing none. It is received into the
    record.
    record.
                            (Show Me's Exhibit 403 was received into
                            (Show Me's Exhibit 403 was received into
        the record.)
        the record.)
    JUDGE BUSHMANN: First cross would be
    JUDGE BUSHMANN: First cross would be
    Missouri Landowners.
    Missouri Landowners.
    MR. AGATHEN: No questions, Your Honor.
    MR. AGATHEN: No questions, Your Honor.
    JUDGE BUSHMANN: Rockies Express?
    JUDGE BUSHMANN: Rockies Express?
    MS. GIBONEY: No questions, Judge.
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    MS. GIBONEY: No questions, Judge.
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JUDGE BUSHMANN: Commission staff?
MS. ASLIN: No questions.
JUDGE BUSHMANN: MIEC?
MR. MILLS: No, thank you.
JUDGE BUSHMANN: Infinity Wind Power?
MS. PEMBERTON: No questions.
JUDGE BUSHMANN: Wind on the Wires?
MR. BRADY: No questions.
JUDGE BUSHMANN: MJMEUC?
MS. WHIPPLE: No questions, Judge.
JUDGE BUSHMANN: Grain Belt Express?
MR. HARDEN: Thank you. Very shortly.
CROSS-EXAMINATION
BY MR. HARDEN
Q. Good morning, Mr. Turner.
A. Good morning.
Q. Joshua Harden. Mr. Turner, would you agree that the irrigability of soil depends -- or the irrigability of land in general depends at least in part on soil type and composition?
A. Yes.
Q. And are you familiar with the soil survey conducted by the U.S. Department of Agriculture National Resource Conservation Service which includes maps and types of soil types?

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A. Very familiar.
Q. And would you agree that the U.S. Department of Agriculture NRCS soil survey is a reliable scientific source of information regarding soil type and composition?
A. It's pretty good.
Q. And you don't dispute, do you, that Grain Belt Express would work or attempt to work with agricultural producers to minimize the impact of the line on agricultural operations and producers, do you?
A. I would neither agree or dispute.
Q. Fair enough.

You don't dispute, do you, that it would be in Grain Belt Express's financial and economic best interest to work with agricultural producers since agricultural impacts would increase the cost of the easement agreement to Grain Belt Express?
A. I would suspect that the engineering of the line, the location of towers with respect to the need to support the line would outweigh the cooperation with landowners with regard to their wishes.
Q. Okay. Would you agree that farmland is not homogeneous and that there's unique

1 characteristics to topography and other features of 2 each farm parcel or farmland?

Yes.
Q. And so, would you agree that a condition imposed of minor deviations, allowing minor deviations to the route would give Grain Belt Express greater flexibility to work with agricultural producers to, in fact, minimize impacts to agricultural operations?
A. Could you repeat that, please?
Q. Sure, sure. Would you agree that a condition, should this Commission decide to grant the CCN, a condition opposed -- imposed upon that, that certificate of allowing Grain Belt Express minor deviations to the route, okay, would give Grain Belt Express the needed flexibility to work with agricultural producers so that they could minimize the impact of the line and the construction on agricultural operations?
A. It would give them some flexibility. Would it give them the needed flexibility to accommodate the needs and wishes of the landowner, I'm certainly -- I'm certain not in every case.
Q. Sure, absolutely.

MR. HARDEN: No further questions.

1 Thank you.

JUDGE BUSHMANN: Questions?
COMMISSIONER RUPP: No.
COMMISSIONER COLEMAN: No.
JUDGE BUSHMANN: Redirect by Show Me Landowners?

MR. LINTON: Yes, Your Honor.
REDIRECT EXAMINATION
BY MR. LINTON
Q. Mr. Turner, you received a few questions on irrigability -- is that how you pronounce it -irrigation and land topography. Did you do any investigation or study into topology and irrigation possibilities on any of the route in the Clean Line, Grain Belt Express Clean Line route?
A. I did a general study of the
irrigability of the soils and topography along the Grain Belt route and a fairly detailed study on one of the tiles along that route.

MR. LINTON: Your Honor, I'd like to have an exhibit marked. This would be Exhibit 421. JUDGE BUSHMANN: That's correct.
Q. (By Mr. Linton) Mr. Turner, what does this Exhibit 421 represent?
A. Tile 16 which is in southern Monroe

County is an area of the -- along the proposed route that I'm very familiar with and consulting with the soil survey of that area by NRCS and also the USGS topologic -- topographic survey maps identified the sites marked in blue as potential irrigation reservoir sites for the purpose of providing water for large-scale sprinkler irrigation.
Q. So, these sites are impoundments that the route -- the Grain Belt Express line would potentially interfere with?
A. Well, they are potential sites that the Grain Belt Express easement would preclude from construction.
Q. Thank you. I have no further questions.
A. Could I -- could I add one thing to
that --

\section*{Q. Absolutely.}
A. -- David?

The criteria that \(I\) used there was a
drainage area of at least 100 acres and not to exceed 400 acres and a water depth of -- an unexcavated water depth at the dam of at least 15 feet providing sufficient irrigation for a standard center pivot of 130 acres with current technology for water conservation employed.

MR. LINTON: I would move for the admission of Exhibit 421.
(Show Me's Exhibit 421 was offered into the record.)

MR. WILLIAMS: Judge, may I inquire just for some clarification about the exhibit?

JUDGE BUSHMANN: You may.
MR. WILLIAMS: Mr. Shaw, is what's depicted on the exhibit --

JUDGE BUSHMANN: It's Mr. Turner.
MR. WILLIAMS: I'm sorry. Mr. Turner,
is what's depicted on the exhibit -- on the exhibit
it literally says potential irrigation reservoir sites. Are the depictions that are labeled that way places where water impoundments could be located?

THE WITNESS: In my judgment, yes.
MR. WILLIAMS: And then those water -Nathan Williams. And those -- water from those impoundments, then, could be used to provide water to an irrigation system?

THE WITNESS: Yes.
MR. WILLIAMS: Thank you.
JUDGE BUSHMANN: Any objections to 421?
Well, first of all, that exhibit is received into the record.
\begin{tabular}{|c|c|}
\hline 1 & (Show-Me's Exhibit 421 was received into \\
\hline 2 & the record.) \\
\hline 3 & JUDGE BUSHMANN: And I believe we have a \\
\hline 4 & commissioner request for information. \\
\hline 5 & COMMISSIONER RUPP: Yeah. Thank you, \\
\hline 6 & sir. So, are all the blue areas potential \\
\hline 7 & irrigation reservoir sites or just the two that have \\
\hline 8 & arrows? \\
\hline 9 & THE WITNESS: No. All of the blue \\
\hline 10 & spots. The 11 -- \\
\hline 11 & COMMISSIONER RUPP: Okay. Thank you. \\
\hline 12 & THE WITNESS: -- blue patches. \\
\hline 13 & JUDGE BUSHMANN: Any other questions of \\
\hline 14 & redirect? \\
\hline 15 & MR. LINTON: I have no further \\
\hline 16 & questions. \\
\hline 17 & JUDGE BUSHMANN: All right. Mr. Turner, \\
\hline 18 & I believe that completes your testimony. \\
\hline 19 & THE WITNESS: Thank you, sir. \\
\hline 20 & JUDGE BUSHMANN: You may step down. \\
\hline 21 & I believe we're ready for an MLA \\
\hline 22 & witness. \\
\hline 23 & MR. AGATHEN: Thank you, Your Honor. \\
\hline 24 & MLA calls Mr. Joseph J. -- \\
\hline 25 & JUDGE BUSHMANN: Actually, before we do \\
\hline
\end{tabular}
that, why don't we -- why don't we take a short break. We'll be in recess for about 15 minutes.
(A short recess was taken.)
JUDGE BUSHMANN: All right. We're now on the record and, Mr. Zobrist, you had a motion to make.

MR. ZOBRIST: Thank you, Judge. I've had a moment to consult with my client because of the surprise that has been introduced by Show Me in the case in the form of Mr. Justis's impeachment of both his rebuttal and surrebuttal and the marking of what has been marked as, I believe, Exhibit 420 on the basis of the errors that he has testified to preliminarily. We move to strike both his rebuttal and surrebuttal testimony at this time.

MR. LINTON: I would oppose that -MR. HEALY: One second, please. JUDGE BUSHMANN: I believe some other parties may want to joint in that motion. MR. LINTON: Absolutely. MR. HEALY: I'd like to let the record reflect that MJMEUC would join in that motion as well.

MR. BRADY: Wind on the Wires and The Wind Coalition would also concur on that motion,
join that motion.
MS. PEMBERTON: As would Infinity Wind
Power.
JUDGE BUSHMANN: And, Mr. Linton, you had a response.

MR. LINTON: Yes. I oppose the motion. It's not unusual for a witness to have minor changes to his testimony after looking at the surrebuttal of a prior witness's testimony and in this case these are minor changes. Mr. Justis did this in good faith to move the cross-examination along, and I see no reason for this motion to carry.

MR. ZOBRIST: Judge, this is not good faith. The surrebuttal was filed on February 21. If Mr. Justis believed that there was a reason for him to correct his testimony, it should have been done within seven to ten days. Today is March 24th, it's over a month. These are not minor changes. We have tables. We have testimony that is not -- that is changed without tracked changes. So, I don't even know where the numbers are changed. And then attached to that is a revision of schedule 1 to Mr. Justis's --

MR. LINTON: Your Honor, if --
MR. ZOBRIST: -- rebuttal, and it's not
in good faith and it's ambush, and the rebuttal and the surrebuttal should be stricken from the record.

MR. LINTON: If Exhibit 420 is
objectionable, we will withdraw 420.
MR. ZOBRIST: Well, it's only
objectionable to the extent that it impeaches the rebuttal and the surrebuttal, and we have testimony from the witness stand that indicates at least four categories of errors that have occurred and justice requires that his rebuttal and surrebuttal be stricken and he not be permitted to testify.

MR. LINTON: Your Honor, this is a -JUDGE BUSHMANN: I think -- I think I've decided what I'm going to do. I don't think it's appropriate to strike rebuttal and surrebuttal testimony. So, that motion is denied.

With regard to the exhibit, I'm going to reserve ruling on that and allow Grain Belt Express an opportunity to review the information to prepare any changes that might be necessary to its examination of Mr. Justis. We'll move him to the end of the line for witnesses for today. So, that would occur sometime later this afternoon. I hope, anyway, that would be enough time for Grain Belt Express to look at any changes, and then at that
time we'll take up a motion to admit 420 into the record. So, I won't make that decision right now. I'll do that when Mr. Justis comes back later.

MR. ZOBRIST: Judge, I appreciate your trying to give us an opportunity. I've consulted with my client. We will not have an opportunity to be adequately prepared to address these changes today, but we're going to finish this hearing today because this is trial by ambush and I'm willing to take Mr. Justis and cross-examine him even if the Court -- well, regardless of the ruling on Exhibit 420, we want to finish this case today.

JUDGE BUSHMANN: All right. Well, let's move along. We're ready for Mr. Jaskulski who we attempted to start.

MR. AGATHEN: Thank you, Your Honor. Before I begin, could I ask one question? We've got three witnesses scheduled for today. Could they be excused after they step down from the witness stand? JUDGE BUSHMANN: Yes, they may. MR. AGATHEN: Thank you. JUDGE BUSHMANN: Could you raise your right hand, sir. Do you solemnly swear or affirm that the testimony you're about to give will be the truth?
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            THE WITNESS: Yes, I do.
            JUDGE BUSHMANN: You may proceed.
                    JOSEPH JASKULSKI,
    having been called as a witness herein, having been
        first duly sworn, was examined and testified as
        follows:
            DIRECT EXAMINATION
    BY MR. AGATHEN
    Q. Would you state your name, please, and
    spell it for the record.
    A. Joseph Jaskulski. Last name is
    J-A-S-K-U-L-S-K-I.
    Q. Did you submit rebuttal testimony for
    this case in both highly confidential and NP
versions?
A. I did.
Q. And are those marked as Exhibit 302-HC
and 302-NP?
A. Yes. 300, I think.
Q. I think they're marked actually 302 --
A. Okay.
Q. -- HC and 302-NP.
A. Very well.
Q. And did you also submit surrebuttal
testimony in both HC and NP form?

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A. I did.
Q. And are those marked Exhibits \(302-\mathrm{HC}\) and \(302-N P ?\)
A. What I have is marked Exhibit 307.
Q. 307. I'm sorry. Yes.

Did you in your surrebuttal testimony state that you had made a mistake or an error in your rebuttal testimony?
A. I did.
Q. Could you turn to your rebuttal testimony, \(I\) believe it's at page 10, and indicate what change would have to be made in your rebuttal testimony to reflect the fact that you said in your surrebuttal testimony that you had made an error.
A. Yes. On line number 192 on page 10 I'd removed the word "flawed" and I would remove the two sentences that begin on line 194 and end on one -line 196.
Q. With those changes, if I were to ask you the question set forth in the rebuttal testimony today, would your answers be the same?
A. Yes, they would.
Q. And is that true also for your surrebuttal testimony?
A. Yes.

MR. AGATHEN: At this point, Your Honor, I would move the admission of Exhibits 302-HC, 302-NP, 307-HC and 307-NP.
(MLA's Exhibits 302-HC, 302-NP, 307-HC and \(307-\mathrm{NP}\) were offered into the record.)

JUDGE BUSHMANN: Any objections?
MR. HEALY: No objection from MJMEUC.
JUDGE BUSHMANN: Hearing none. Those are received into the record.
(MLA's Exhibits 302-HC, 302-NP, 307-HC
and \(307-\) NP were received into the record.)
MR. AGATHEN: Thank you, Your Honor.
JUDGE BUSHMANN: First cross -- first
cross would be Show Me Concerned Landowners.
MR. LINTON: No questions.
JUDGE BUSHMANN: Rockies Express?
MS. GIBONEY: No questions, Judge.
JUDGE BUSHMANN: Commission staff?
MR. WILLIAMS: No questions.
JUDGE BUSHMANN: MIEC?
MR. MILLS: No questions.
JUDGE BUSHMANN: Wal-Mart?
MR. WOODSMALL: No questions.
JUDGE BUSHMANN: Infinity Wind Power?
MS. PEMBERTON: No questions.
\begin{tabular}{|c|c|}
\hline 1 & JUDGE BUSHMANN: Wind on the Wires? \\
\hline 2 & MR. BRADY: No questions, Your Honor. \\
\hline 3 & JUDGE BUSHMANN: MJMEUC? \\
\hline 4 & MR. HEALY: Yes, sir. \\
\hline 5 & CROSS-EXAMINATION \\
\hline 6 & BY MR. HEALY \\
\hline 7 & Q. Mr. Jaskulski, is that correct? \\
\hline 8 & A. Yes, it is. \\
\hline 9 & Q. Good morning. How are you doing, sir? \\
\hline 10 & A. I'm doing fine. Thank you. \\
\hline 11 & Q. I have just a few questions. \\
\hline 12 & You are the president of Project \\
\hline 13 & Performance Group; is that correct? \\
\hline 14 & A. That is correct, sir. \\
\hline 15 & Q. How many employees does that company \\
\hline 16 & have? \\
\hline 17 & A. Technically, we have no employees. I \\
\hline 18 & have contract workers who work for me from time to \\
\hline 19 & time. Three are regular employees, contract \\
\hline 20 & employees. \\
\hline 21 & Q. And on page 3 of your rebuttal you state \\
\hline 22 & that you are a LEED accredited professional; is that \\
\hline 23 & correct? \\
\hline 24 & A. Yes, I am. \\
\hline 25 & Q. And you would agree with me that \\
\hline
\end{tabular}

1 renewable energy, wind energy in particular has certain attributes that makes it desirable?
A. Yes.
Q. And is this your first time giving testimony to a public utility or public service commission?
A. It is.
Q. And you collaborated with Glen Justis in developing your testimony; is that correct?
A. I would not choose the word "collaborated." He and I spoke on two occasions by phone.
Q. Thank you for the clarification.

And you spoke about the testimony in
this case, though; is that correct?
A. Yes.
Q. On your rebuttal testimony on page 11 -do you have your testimony in front of you, sir?
A. I do.
Q. Page 11, line 207, you started conversation about the production tax credits?
A. Yes.
Q. When you first initially analyzed potential usage of the Grain Belt transmission service agreement by MJMEUC, did you assume that

1 MJMEUC would take the risk of any PTCs not being 2 awarded to the wind developer?

1 this line?
2 A. Yes.
.
Q. Would you also agree, just a general proposition, that parties don't usually engage in lengthy negotiations and contracts without the intent to take advantage of the fruit of those negotiations?
A. No.
Q. On page 18, line 380 of your testimony, it starts with a general question -- actually, I'm sorry. I apologize. Line 379 is where the question starts, and it talks about wind energy generating in Kansas being less expensive -- or the question is is it less expensive than wind generated in Missouri. After reviewing the Iron Star and the Grain Belt TSA, wouldn't you agree that for the option presented in that particular contract that represents the lowest cost renewable option available to MJMEUC?
A. No.
Q. You would not agree?

Can you point to a particular scenario that you consider a cheaper renewable energy?
A. That the -- let me answer it this way. It is cheaper than any of the bids received by
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MJMEUC in their September solicitation of wind
proposals. However, that solicitation was expressly
for Kansas wind to be connected to Grain Belt. So,
we really don't know what type of response MJMEUC
would have gotten had they opened up that
solicitation to wind generated in Missouri or
elsewhere. So, I will agree that the Iron Star
Grain Belt combination is lower cost to MJMEUC than
the lowest cost proposal received in September of
2016. However, I don't believe that that
solicitation really opened up competition to all
potential suppliers to MJMEUC.
Q. You would agree, though, that
solicitation elicited a number of responses not
using a GBX line in response to that RFP, wouldn't
you?
A. Correct. I think there were 12 that did
not use GBX and two that did.
Q. And those responses were in MISO and
they were not competitive with the GBX Iron Star
option, were they?
A. They were higher cost than the Kansas
wind -- or Iron Star GBX combination. I don't know
about competitive. There are other factors that
would enter into determining competitiveness.

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Q. That's fair enough.

But you would agree it was the lowest cost option?
A. Of those, yes. Well, Iron Star was not in that, but, yes, Iron Star was cheaper than those proposals.

MR. HEALY: Judge, if we can go in-camera just briefly.

JUDGE BUSHMANN: We'll go into closed
session. Anybody in the audience that is not authorized to listen to confidential information will need to leave, please.
(REPORTER'S NOTE: At this point, an in-camera session was held, which is contained in Volume 19, Page 1459 through 1464.)

(REPORTER'S NOTE: The proceedings
resumed in open session.)

JUDGE BUSHMANN: All right. We're back in open session.
Q. (By Mr. Healy) Just a couple more questions, Mr. Jaskulski, and I'll be -- I'll be finished here.

Are you generally familiar with how MJMEUC is set up as an organization?
A. My understanding is they are an organization of municipal utilities through -- that are located in Missouri. I'm not sure that's correct. That's my understanding.
Q. It's close.

Would you agree or are you aware that it's a nonprofit entity?
A. No, I don't know that.
Q. Okay. And if I told you we had no shareholders, you'd have no reason not to believe me?
A. No, no reason at all.
Q. And if it doesn't have shareholders and if it is a nonprofit, all savings would be passed on to those members, correct?
A. I think so. I don't -- seems like

1 they're the only people left to get the savings.
Q. And, Mr. Jaskulski, how much are you being paid per hour today to be here?
A. \(\$ 300\).

MR. HEALY: Thank you, Judge. That's
all the questions I have.
JUDGE BUSHMANN: Grain Belt Express?
MR. ZOBRIST: Thank you, Judge.
CROSS-EXAMINATION
BY MR. ZOBRIST
Q. Mr. Jaskulski, you're a mechanical engineer, not an electrical engineer?
A. That's correct.
Q. And is it true that you have not worked for a company with transmission assets since your Commonwealth Edison days?
A. No, that's not correct.
Q. Now, you stated when you worked for ComEd that you worked in coal-fueled generation stations; is that correct?
A. That's where \(I\) spent most of my time, yeah.
Q. Now, in your resume that's attached as schedule 1 to your direct testimony, isn't it true that the word "transmission" is never mentioned
there?
A. That's probably true.
Q. And, in fact, the first item in your professional profile states that you have experience in large scale/high profile construction projects; is that true?
A. Yes.
Q. And that's such as Soldier Field in Chicago and Midway Airport in the Chicago Transit Authority, correct?
A. That's correct.
Q. And you've never worked for a wind generation company, correct?
A. As an employee, no.
Q. And you've never worked for a utility that only has transmission assets?
A. That's correct.
Q. And in your CV you do not hold yourself out as an expert in the field of taxation, correct?
A. That's correct.
Q. Now, as I understand it, you didn't have any work papers, per se, in -- with regard to the analysis that you did. Everything that you did is reflected in the schedules to your testimony?
A. I believe we did file work papers

1 separately.
Q. You did not conduct a levelized cost of energy analysis, correct?
A. That's correct.
Q. And you did not conduct a levelized avoided cost of energy analysis, did you?
A. That's correct.
Q. And you didn't do any production cost modeling with regard to the effect of the Grain Belt Express project on wholesale energy costs, correct?
A. Can you repeat that?
Q. Yeah.
A. Sorry.
Q. Did you conduct a production cost model analysis using a tool like PROMOD regarding the effect of the Grain Belt Express project on wholesale energy costs?
A. No.
Q. And you didn't conduct a loss of load expectation analysis either, did you?
A. No, I did not.
Q. Now, I just want to make certain I understand the correction that Mr. Agathen made at the beginning. Does that relate to the spreadsheet error that you thought had occurred with regard to

1 calculating the loss component of costs?

2
A. That's correct; although, I would not characterize it as a spreadsheet error. It was an error in my interpretation of Mr. Grotzinger's spreadsheet.
Q. I see. And so, with regard to that issue, that is where you said I withdraw my statement that MJM, MJMEUC Data Request 13 contained an error; is that correct?
A. That is correct.
Q. Now, in your surrebuttal at page 4, if I'm reading this correctly, you assume that the Kansas wind farm through which MJMEUC would take service would be 135-megawatt size wind farm; correct?
A. For the purposes of JG-6, that is correct.
Q. And, in fact, the Iron Star project is to be a 300-megawatt project, correct?
A. Actually, I believe 400.
Q. Now, let me just ask you a few questions about the production tax credit. Are you familiar with Internal Revenue Service Notice 2016-31 that was issued in June of last year?
A. I don't know it by that number perhaps.

1

2
Q. Let me show you a document and see if you can identify that.

What did I mark that as?
A. 132 .

MR. ZOBRIST: Mr. Justis, I've handed you what I've marked as Exhibit 132.
Q. (By Mr. Zobrist) This is an Internal Revenue bulletin that was issued June 6th, 2016, but if you turn to the second page, it relates to the beginning of construction for sections 45 and 48. Are you generally familiar with those provisions and particularly, on the next page, the section 3 with regard to the --
A. I'm sorry. I've lost place here.
Q. Sure.
A. I believe I've seen this document, but I've seen it in a different format. So, I can't be sure. I mean, it was off the internet in a more of a text, plain text format as opposed to formatted in three columns.
Q. Okay.
A. So, I don't know where you're referring me to. If you could help.
Q. If you can go to the third page of this document.
A. This is page 1026?
Q. Correct. And it says section 3 regarding the extension and modification of the continuity safe harbor. Do you see that?
A. Yes.
Q. And are those the provisions with regard to the production tax credit with which you are familiar?
A. Yes, they are.
Q. And am I correct that there is a section of this IRS notice that relates to disruptions to continuous construction or continuous efforts tests. You see that, sir?
A. This is at the top of the second column?
Q. Correct.
A. Yes.
Q. And then below that there is a subsection in parentheses 2 that relates to excusable disruptions; is that true?
A. Yes.
Q. And starting that section up at . 02 , the disruptions to continuous construction section, that sentence says in general that Section 4.06(1) of notice 2013-29 provides that whether a taxpayer satisfies the continuity requirement will be

1 based -- pardon me, will be determined by the
2 relevant facts and circumstances, correct?

3
A. That is correct.
A. I do.
A. Yes. category; is that correct?
A. That's correct.
A. Yes.
Q. And then at the bottom of the next full paragraph that begins with the excusable disruptions, it provides a list of additional excusable disruptions and then the first one is \(A\) in parentheses, related to severe whether conditions.
Q. And is that your understanding that that is one of the excusable disruptions?
Q. Okay. And then go down to subsection C. Am I correct that it also states that an excusable disruption will be delays in obtaining permits or licenses from federal, state, local, or Indian tribal governments including, and then it lists a whole set of agency permits that fall within that
Q. And then if you go down to subsection \(E\) in parentheses, an excusable disruption also relates to interconnection-related delays; is that true?
Q. And such interconnection-related delays can be such as the completion of construction on a new transmission line or necessary transmission upgrades to resolve grid congestion issues that may be associated with a project's planned interconnection; is that correct?
A. Yes.

MR. ZOBRIST: Your Honor, I offer Exhibit 136 I think I marked it as. JUDGE BUSHMANN: 132. MR. ZOBRIST: Pardon me. 132. (Grain Belt's Exhibit 132 was offered into the record.)

JUDGE BUSHMANN: Exhibit has been offered. Any objections?

Hearing none. It is received.
(Grain Belt's Exhibit 132 was received into the record.)
Q. (By Mr. Zobrist) Now, in your analysis of the production tax credit issue, is it fair to say that you presumed that any risks associated with any decrease or phase-out of the production tax credit would be assumed by the purchasers of the energy or the capacity on the Grain Belt Express line?

1

2
A. I believe I said that the -- any such increase in cost would have to be absorbed either by the wind farm or by the purchaser of the power and then said what the impact would be if either of those -- if either of the two parties absorbed the cost.
Q. And if it were not absorbed by the purchaser of the energy, then that risk would likely not be borne by that purchaser's ratepayers or customers, correct?
A. I'm sorry. Can you repeat that?
Q. Yeah. If the purchaser of the wind energy does not accept the risk of the reduction of the production tax credit, then it's unlikely that that purchaser's customers or ratepayers would not be subject to any cost resulting from the diminution of the production tax credit?
A. I'm sorry. There were three not's in there.
Q. Let me try again.
A. Yeah. Thank you.
Q. Let me try again.
A. I think the answer is yes to your question, but with the three not's I just want to be sure.
Q. We have a situation where the purchaser of the energy does not accept the risk of a production tax credit diminution. Okay? So, if that's the premise, that they've not accepted the risk of the decline in the production tax credit, then their customers or ratepayers aren't going to be paying for any costs that result from that decrease in the production tax credit?
A. Correct.

MR. ZOBRIST: That's all I have, Judge. JUDGE BUSHMANN: Any questions? COMMISSIONER RUPP: Yeah, I do. JUDGE BUSHMANN: Questions from commissioners.

COMMISSIONER RUPP: Good morning, sir. THE WITNESS: Good morning. COMMISSIONER RUPP: I got a little confused in some of the questioning and the testimony. So, I'm going to ask you just to clear up a couple things in your testimony.

Page 11 you were talking about the do nothing alternative. Are you advocating that that is what should be done or is that just an option that's available to MJMEUC?

THE WITNESS: That is an option that

1 is -- should be considered whenever an investment decision is being considered. It doesn't mean that it is the appropriate choice, and it also should probably be better phrased as do nothing now is an alternative that should be always considered. COMMISSIONER RUPP: Okay. And then on page 18 you were asked about the question on line 379 is wind energy generated in Kansas and transmitted over Grain Belt Missouri less expensive than wind generated in Missouri. What is your answer to that question?

THE WITNESS: The answer, based on the bids that were received that we -- that were shared with us, it's not. Based on the Iron Star agreement compared to the lowest bid for Missouri wind and using the assumptions \(I\) used in my surrebuttal calculations, it is -- Kansas wind is cheaper by \$3 million annually, Kansas wind over Grain Belt.

COMMISSIONER RUPP: Okay. So, where is the other lower cost wind that...?

THE WITNESS: That would be a -- I used as a proxy for Missouri wind pricing. I think that would be a confidential answer. I don't -- if I can answer the question out of camera or in camera, whatever you call this.

MR. HEALY: If I can just briefly. The RFP responses were considered confidential and we filed them as HC. I don't know if there's a problem discussing generality, so long as names and locations are not attached, but if you're going to need the details, \(I\) would ask go in camera.

COMMISSIONER RUPP: Generality is fine.
THE WITNESS: I used the lowest price quoted by a Missouri -- Missouri located wind farm based on the bids that were received by MJMEUC in September of 2016.

COMMISSIONER RUPP: And that was the all-in price, the transmission price and everything?

THE WITNESS: That was the price at the wind farm.

COMMISSIONER RUPP: At the wind farm. But didn't factor in the total congestion costs or transmission costs and everything?

THE WITNESS: That price doesn't, but then the analysis I did in my attached spreadsheet -- let me get the -- in my surrebuttal, schedule JJC-6 factors in a congestion adder for the Missouri wind farm. So, my \(\$ 3\) million includes that cost.

COMMISSIONER RUPP: Is that titled
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calculation of Kansas wind cost delivered to
Missouri - highly confidential? Is that the --
THE WITNESS: Can you refer me to a
page, please? Thank you.
COMMISSIONER RUPP: I have --
THE WITNESS: I'm -- Commissioner, I
think you're looking at my rebuttal testimony.
COMMISSIONER RUPP: That's right.
THE WITNESS: And that was -- that
schedule was effectively superseded by my
surrebuttal schedule.
COMMISSIONER RUPP: Okay.
THE WITNESS: So, if you can turn to
JJG-6 -- JJC-6, I think.
COMMISSIONER RUPP: You're right. I was
in rebuttal. It would help if I had the right
witness. Sorry. I was looking on the wrong
witness.
All right. Okay. That's all I had
then.
JUDGE BUSHMANN: Any cross based on
bench questions? Show Me Landowners?
MR. LINTON: No questions.
JUDGE BUSHMANN: Rockies Express?
MS. GIBONEY: No questions, Judge.

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JUDGE BUSHMANN: Commission staff?
MR. WILLIAMS: No questions.
JUDGE BUSHMANN: MIEC?
MR. MILLS: No questions.
JUDGE BUSHMANN: Wal-Mart?
MR. WOODSMALL: No questions.
JUDGE BUSHMANN: Infinity Wind?
MS. PEMBERTON: No questions.
JUDGE BUSHMANN: Wind on the Wires?
MR. BRADY: No questions.
JUDGE BUSHMANN: MJMEUC?
MR. HEALY: Just a couple, Judge.
RECROSS-EXAMINATION

BY MR. HEALY
Q. Commissioner Rupp asked you about the do nothing or do nothing now alternative on page 11 of your rebuttal testimony.
A. Yes.
Q. And since you've written that testimony, of course, you're aware that MJMEUC entered into the Iron Star contract, correct?
A. That is correct.
Q. And are you aware that MJMEUC has entered into contracts with its members for 100 megawatts now to deliver to them?
A. I am not aware.
Q. Okay. That was previously introduced on the record in this proceeding. Would you agree that at this point MJMEUC's contractually obligated to honor its contracts with Infinity and Grain Belt and to proceed with this?

MR. AGATHEN: Your Honor, could I have that question repeated, please?
Q. (By Mr. Healy) Sure. At this point, based on your understanding, would you agree that MJMEUC is contractually obligated to fulfill its obligations with Iron Star and Grain Belt for the member's demand and contracts with its members?

MR. AGATHEN: I would object, Your
Honor. That calls for a legal conclusion.
MR. HEALY: This is based off his understanding, Judge. He testified about the contracts extensively.

JUDGE BUSHMANN: There's been a lot of testimony about obligation under the contract. So, I'm going to overrule the objection.
A. Can you repeat it? I'm sorry again.
Q. (By Mr. Healy) I'll try to repeat it in a simpler way. I apologize. It's kind of -there's three contract legs here, obviously.

There's a contract between MJMEUC and Grain Belt Express for transmission that's been entered into. There's a contract between MJMEUC and Iron Star for -- that says that we have to provide 100 megawatts in order customer's demand and up to 200 megawatts, and then, of course, there's the contracts between MJMEUC and its actual members. And at this point there is 100-megawatts contracts between our members and MJMEUC. At this point the do nothing alternative, is that still an option?
A. No.

MR. HEALY: Thank you, Judge. That's all I had.

JUDGE BUSHMANN: Recross by Grain Belt?
MR. ZOBRIST: Nothing further, Judge.
JUDGE BUSHMANN: Redirect by Missouri
Landowners?
MR. AGATHEN: Thank you, Judge.
REDIRECT EXAMINATION
BY MR. AGATHEN
Q. Do you recall some questions about the RFP that was issued by MJMEUC for wind generation?
A. Yes.
Q. Or wind energy?
A. Yes, I do.
Q. Do you know when that RFP was issued?
A. Was issued in mid-August of 2016.
Q. And were there any restrictions included within that RFP?
A. Yes.
Q. What were they?
A. They were for delivery from wind farms to be connected to Grain Belt's western terminus station in Kansas.
Q. Is there any way at all to determine how many additional responses they have made -- they may have received if that restriction had not been included in the RFP?
A. No.

MR. AGATHEN: That's all I have.
JUDGE BUSHMANN: That completes your
testimony, sir.
THE WITNESS: Thank you. And I'm
excused?
JUDGE BUSHMANN: You are.
Ready for the next witness?
MR. AGATHEN: Yes, Your Honor. The MLA calls Mr. Kurt Kielisch.

JUDGE BUSHMANN: Raise your right hand, please. Do you solemnly swear or affirm that the
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testimony you're about to give will be the truth?
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testimony you're about to give will be the truth?
    THE WITNESS: I do.
    THE WITNESS: I do.
    JUDGE BUSHMANN: You may be seated.
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    JUDGE BUSHMANN: You may be seated.
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            KURT KIELISCH,
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            KURT KIELISCH,
    having been called as a witness herein, having been
    having been called as a witness herein, having been
        first duly sworn, was examined and testified as
        first duly sworn, was examined and testified as
                                    follows:
                                    follows:
            DIRECT EXAMINATION
            DIRECT EXAMINATION
    BY MR. AGATHEN
    BY MR. AGATHEN
    Q. Would you state your name for the record
    and spell it please.
    A. Certainly. My name is Kurt Carl
Kielisch. Kurt with a K. Carl with a C. Kielisch,
K-I-E-L-I-S-C-H.
    Q. Did you file rebuttal testimony in this
    case, which is marked as Exhibit No. 301?
    A. I did.
    Q. And that includes schedules which start
    at page 36 of that document?
    A. Yes.
    Q. If I were to ask you the questions set
        forth in your rebuttal testimony today, would your
        answers be the same as those set forth therein?
            A. They would.
        MR. AGATHEN: Your Honor, I would offer
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| 1 | Exhibit 301 at this point. |
| :---: | :---: |
| 2 | (MLA's Exhibit 301 was offered into the |
| 3 | record.) |
| 4 | JUDGE BUSHMANN: Are there any |
| 5 | objections to its receipt? |
| 6 | Hearing none. It's received. |
| 7 | (MLA's Exhibit 301 was received into the |
| 8 | record.) |
| 9 | JUDGE BUSHMANN: Cross-examination Show |
| 10 | Me Concerned Landowners? |
| 11 | MR. LINTON: No questions, Your Honor. |
| 12 | JUDGE BUSHMANN: Rockies Express? |
| 13 | MS. GIBONEY: No questions, Judge. |
| 14 | JUDGE BUSHMANN: Commission staff? |
| 15 | MS. ASLIN: No questions, Judge. |
| 16 | JUDGE BUSHMANN: MIEC? |
| 17 | MR. MILLS: No questions. |
| 18 | JUDGE BUSHMANN: Infinity Wind Power? |
| 19 | MS. PEMBERTON: No questions. |
| 20 | JUDGE BUSHMANN: Wind on the Wires? |
| 21 | MR. BRADY: No questions. |
| 22 | JUDGE BUSHMANN: MJMEUC? |
| 23 | MS. WHIPPLE: No questions, Your Honor. |
| 24 | JUDGE BUSHMANN: Grain Belt Express? |
| 25 | MR. HARDEN: Thank you, Your Honor. |

## CROSS-EXAMINATION

BY MR. HARDEN
Q. Good morning, Mr. Kielisch.
A. Good morning.
Q. Am I pronouncing your name correctly?
A. Yes, you are.
Q. Okay. Thank you. So, I just want to make a couple of things certain from the outset. In this case you have not done an actual appraisal or a mass appraisal of real estate in Missouri; is that correct?
A. That is correct.
Q. Okay. And because you agree, don't you, that it would be unlawful for you to conduct any appraisal in Missouri because you're not licensed as an appraiser to do that in the state of Missouri. Is that also correct?
A. That is correct.
Q. Okay. So again, hope this isn't cumulative, but to be clear, you in your testimony and here today are not saying that the Grain Belt Express project will have any specific devaluation of any real estate in Missouri because to do so would be a violation of Missouri state law; is that

1 correct?

2
A. No. To do so, if I was specifically
looking at a piece of property, of real estate, then that would be, but to have a general opinion on the impact would not.
Q. Fair enough. Fair enough.

Now, have you been subject to any
investigation or disciplinary action by a professional standards or ethics board in the state of Missouri or any other state?
A. Only in North Dakota.

Let's make this clear. Could you
specify that question?
Q. I think we're getting to your exception. So, specify whether or not there's been an investigation into a standards violation or an ethical misconduct by a state professional board.
A. Well, any complaint would result in that analysis. So, to that degree, I would have to say there were others, but the complaints were all dismissed.
Q. Okay. Fair enough.

What I've handed you is a document from the North Dakota Real Estate Appraiser Qualifications and Ethics --

JUDGE BUSHMANN: Excuse me, Mr. Harden. Do you have any bench copies?

MR. HARDEN: Yeah. I wasn't going to quite admit it -- or offer it quite yet, but I'd be happy to give you one. There's two. Would you like more?

JUDGE BUSHMANN: I think that's fine.
MR. HARDEN: Thank you.
Q. (By Mr. Harden) The document that I've handed you is entitled at the top North Dakota Real Estate Appraiser Qualifications and Ethics Board; is that right?
A. That is correct.
Q. Okay.

MR. MILLS: Mr. Harden, do you have copies for counsel?

MR. HARDEN: Can you pass that? Oh, give me one.

MR. MILLS: Thanks.
Q. (By Mr. Harden) I'm looking at the second paragraph, investigations. Looks like it's marked INV Investigation 214-133. Do you see where I'm referring to?
A. I do.
Q. Okay. And tell me if I read this

1 paragraph correctly. The respondent, Kurt Kielisch, 2 was on line for discussion. The complaint alleges 3 bias and a general lack of competency. A detailed 4 discussion took place. Did I get that part right? 5 A. You did. included the value was based on sales from a 8 different county. The agricultural market is very 9 location-specific. Therefore, using sales outside 10 of the locale may be disleading. Have I gotten that 11 right so far?
A. You have.
Q. Disregard of the income approach when the investor is buying, an explanation should be provided when exclude -- when excluding of an approach to value, did not state mineral property rights, did not appear to pair similar sales with similar properties with transmission lines. Have I gotten everything accurate so far?
A. You have read it correctly.
Q. Thank you. No. 5: The lack of support for time adjustment. 6: Lack of reasoning or support for reconciliation. The board concludes the report shows fundamental issues that are deficient. Based on the allegations and review of all the

1 information provided, the board determined there was 2 probable cause to believe a violation occurred. Joe

3 Ibach moved to proceed with disciplinary action.
4 Tim Timian seconded the motion. Then it goes
5 through the various names of the board. All voted
6 yes to the motion. The vote was unanimous. The
7 motion carried.

8

9 referred to the attorney general of North Dakota?
10 with them at this point.
Q. Thank you, Mr. Kielisch.

Now, you are familiar with the Uniform Standards of Professional Appraisal Practice, are you not?
A. I am, yes.
Q. And is it or is it not your contention

22 that the analysis that you provided in your rebuttal
23 testimony conforms to the standards established by
24 the Uniform Standards of Professional Appraisal
25 Practice, which I guess we'll call it -- is it

USPAP?
A. USPAP for short.
Q. USPAP, I'll use that.

So, is it your contention that the analysis that you provided in your rebuttal testimony conforms to the standards established by those uniform standards, the USPAP?
A. No. It doesn't have to be. This is consulting. Consulting is not in the USPAP and there are no standards in consulting.
Q. Okay. There are no stand -- there are no standards in consulting?
A. Well, let's clarify that one. No standards -- USPAP has standards, standards 1 , standards 2, standards 3 and so forth. What I'm saying is there are no standard $1,2,3$, or 4 , what have you, for consulting in USPAP. As a matter of fact, the USPAP has dropped consulting out of its authority.
Q. Okay. But, Mr. Kielisch, would you agree with me that even in the consulting context, so that one could assess the quality of the consultation that some professional -- that some professional standards should be applied?
A. Well, certainly.
Q. Okay. Thank you.

Wouldn't it make sense that as an appraiser in with consulting that you would use the, the USPAP as a -- as a standard that you would apply to your own work?
A. Again, the USPAP does not apply --
Q. No. I --
A. -- to real estate consulting --
Q. Right. My question --

MR. AGATHEN: Excuse me. Could the witness finish his answer, please.

MR. HARDEN: Certainly.
A. So, I don't see why it would have to -there are no standards in the USPAP that deals with consulting.
Q. (By Mr. Harden) I understand that.
A. Okay.
Q. And it's your professional opinion that it would not -- using those standards would not be appropriate or right or -- is that your testimony?
A. I think you're talking in circles. Not using standards of something doesn't exist.
Q. Okay. Now, you provide a definition of sorts on page 5 of your rebuttal testimony for market value; is that correct?

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5 definition which is provided in the USPAP; is that 6 correct?
A. Yes, that would be correct.
Q. And again, with the understanding that they don't apply, that market value definition that you provide is different than the market value A. Oh, it's much more lengthy in USPAP and that's why $I$ started in laymen's terms what it is. This wasn't a definition of USPAP.
Q. Sure. So, in your definition of market value, you don't -- you don't mention the concept of putting in any conditions into the market value; is that correct?
A. Boy, you better explain that one. I'm not following you.
Q. Sure, sure. In the -- in the USPAP definition of market value, actually in the comment -- and we can subject to check. I have it here. -- it talks about the appraiser putting in conditions into the definition of what he deems market value, people's perceptions, etc., etc. You don't -- when you define market value, you've already said that it's not the same as the USPAP definition, but you don't attempt to put any conditions on establishing the market value; is that

1 correct?

2
A. Well, what do you mean by conditions?
Q. Okay.
A. Can you elaborate that?
Q. Absolutely.
A. I'm not really following you.
Q. So, and please correct me if I get the USPAP understanding wrong. USPAP provides a comment as to what it means by these conditions and it says that generally they fall into three categories: The relationship, knowledge, and motivation of the parties, the seller and buyer, who the parties are to the transaction. No. 2: The terms of the sale. Is it cash? Is it equivalent cash? No. 3: The conditions of the sale. And then it cautions appraisers. It says appraisers are cautioned to identify the exact definition of the market value and its authority applicable in each appraisal completed for the purpose of market value. So, when I say conditions, I'm referring to that definition and that comment within the USPAP.
A. Okay. Well, I do think my answer on the page that you cited clarifies that in laymen's terms. And again, this is not an appraisal. So, I'm not giving a value to a specific piece of

1 property.
Q. Sure. And to a certain extent, I kind of agree with you. So, let's talk about Category No. 1, the relationship, knowledge and motivation of the parties. Would you agree that this category affects one of the major themes of your testimony, which is the perception of a would-be buyer?
A. The relationship between the buyers?

No. A perception is a buyer's perception. That isn't in direct relation with another individual. What they're talking about there is if you happen to have a brother or sister or family relation, something like that.
Q. Okay. Would you agree that it says in essence that before you try to determine people's perceptions that you should determine what the relationship, knowledge, and motivation of the potential buyers are?
A. Yeah, generally.
Q. Okay. And then you write on page 5, line 8 through 11 of your testimony, essentially the value of property is based on the perception of the buyer. Understand that perception drives value is the foundation in analyzing the effect that electrical transmission lines have on property

1 value. Is that correct?
2 A. That is correct.

8 list some, one being the internet. Did I correctly 9 paraphrase that testimony?
A. Yes.
Q. Okay. And then, as I understand your testimony, in an endeavor to figure out what people's perceptions are regarding HV high voltage transmission lines you Googled do high voltage power lines pose a risk to health; is that correct?
A. Yes. As an example of what, what is out there, yes.
Q. Sure. But from that search -- well, let me ask you this: Are you generally familiar with the concept of selection bias?
A. Yes.
Q. Okay. Would a decent definition of selection bias be a selection of individuals, groups or data for analysis in such a way that proper randomization is not achieved, thereby ensuring that

1 the sample obtained is not representative of the
2 population intended to be analyzed? Is that a
3 fair --
A. That sounds like a quote out of a textbook, but --
Q. Actually, I Googled it.
A. Oh, there you go. Yes.
Q. But is that a fair definition?
A. I would say, yes.
Q. Okay. All right. So, just to make sure. When you Googled this, the phrase, you didn't make any attempt to discern what percentage of the potential real estate buying public would actually in the very first instance go and Google that question to begin with, did you?
A. That is correct.
Q. Okay. So, we run into the same similar problem, don't we, for instance when -- well, let me -- let me move on.

You didn't make any attempt to calculate what weight or what fraction of the potential buyers would do that search; is that also correct? What weight -- those people who did do that search, you didn't make any attempt to go, well, how many of those people only put a little bit amount of weight

1 in the things that they get off the internet?
A. That would be correct.
Q. Okay. So, having neither taken into account the initial selection bias of the people who would Google that to begin with, okay, or the necessary weight that the people who would Google that, okay, in your testimony did you conflate all of that to the perception of the general public?
A. I gave -- in my testimony, I was stating that this is an example of what the general public would receive on such a Google. You can actually Google any different way you like, and I've done several of them, and you will come up with a very similar type of response. This was just one example.
Q. Sure. So, say, as opposed to a Google search for do HVTL lines cause a health risk, you might put in do HVTL lines create a health benefit, in which case you might get those people who -- you would get a different set of results?
A. Well, you might. I highly doubt that.
Q. Likewise, you did the same thing with YouTube; isn't that correct? The same methodology applied to YouTube?
A. Yes.
Q. And in order to discern the market value impact, which as you explained is a function of perception, you then got a bunch of results back from YouTube and assumed that those results reflected the perception of the entire population of potential buyers of real estate. Is that also correct?
A. Again, an example of what an individual would receive if they went to YouTube with that type of search.
Q. Okay. Now, I just want to make sure, Mr. Kielisch. You, yourself, do not believe everything that you read on the internet; is that correct?
A. No, I do not.
Q. Okay. Okay. Going back to the USPAP, which I understand doesn't apply here. Would you agree that the USPAP defines a mass appraisal, okay, as a process of valuing a universe of properties as of a given date using a standard methodology employing common data and allowing for statistical testing?
A. Yes, and concluding a value.
Q. Okay. So, with the understanding that it doesn't apply, when you look at a mass set of

1 real estate and try to determine the impact of a
2 transmission line or any other variable like you did
3 in this case or you at least proffered the studies,
4 would that more or less fit within the definition of
5 a mass appraisal under the USPAP? sale and multiple variables like whether or not there's a transmission line or it could be other things, distance from a grocery store or any number of different variables? Would you agree with that, that that's what a regression analysis is or

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multiple regression analysis?
    A. Yeah, the multiple regression analysis,
    I'm not so sure I agree with this event concept, but
    the multiple regression analysis is a methodology,
    statistical methodology designed to extract a
    variable of which you are trying to conclude if
    there is a value or not to that one singular
    variable amongst many.
    Q. Amongst many?
    A. Yes.
    Q. Okay. So, you've got a whole bunch of
    variables and you're trying to determine the impact
    of one of those specific variables. Do I have the
    right idea there?
    A. Well, you would have to have at least
    two.
    Q. Okay. For multiple?
    A. No. Just for a --
    Q. Oh, just for --
    A. -- a regression.
    Q. Okay.
    A. Yeah, that wouldn't be multiple. That
    would be regression.
    Q. Got you. Okay.
        Do you agree that in a multiple
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1 regression analysis if there's an important
2 relationship between the number of observations,
3 which in this case is real estate sales, right, and
4 the number of independent variables?

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A. Correct.
Q. And would you agree that as the number of variables increase, so too must the number of observations for your regression analysis?
A. In the ideal, ideal world, yes.
Q. Okay. So, conversely, would it be accurate to say that the fewer number of observations in a regression analysis, the less confidence one can have in the relationship of the variables to what you're -- the event or the sale or the observation?
A. Well, and this is an interesting question because this is where the understanding of real estate and appraisal cross over as pure statistical type of analysis. Statistical analysis is simply a tool in the belt of a professional that he can utilize and to understand what the study is doing. So, even as few as, you know, five or six observations to what that variable you're looking for can be very useful and very instructive, if you understand what you're doing and if you understand

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the market and if you have looked at all those
variables independently.
    Q. Okay. So, respectfully, I think I kind
    of understand the answer to the question that I,
    perhaps, did not ask.
    So, let me -- so, in a multiple
    regression analysis, I'm talking about the tool,
    right?
                            A. Yes.
                            Q. The tool. Is the tool more useful if
    you've got more, more variables per observation or
    is it less useful?
    A. I think you meant it the other way
    around.
    Q. Well --
    A. You said more variables per
    observations. An observation would be a sale.
    Q. Right.
    A. So, I think you meant more sales per
    variable.
    Q. Yes.
    A. Okay.
    Q. Thank you, sir.
    A. All right.
    Q. So, is that accurate?
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A. Generally --
Q. Is the tool more --
A. Yeah.
Q. -- useful then?
A. Generally speaking. And understand that statistics was never designed for real estate analysis. Statistics was actually designed in the social sciences into regression analysis and there, of course, you have the ability to expand your study, for instance, adding new people. The problem with real estate is they don't have that ability. You can't just go create more sales. You are -you're given what you have and that is what you need to work with and then by your expertize in the field and understanding value in real estate you can narrow the error, if you will, of the analysis to a point where it is giving a very good result or supportable result I should say.
Q. Do you agree that in your impact study number one you used 70 sales in -- well, first of all, as a general rule of thumb in the appraisal consultation business how many -- how many variables should you have per observation?
A. Well, in statistics and -- the ideal in statistics is 15 per. However, you can have as

1
little as five per if you have a high quality study.
Q. So, in your impact study number one you used 70 sales and specified 21 independent variables for roughly 3.5 sales for every one independent variable; is that correct?
A. I guess that would be right. I didn't run that.
Q. And for your study number two you used 21 -- or 91 sales and specified 18 independent variables for a ratio of roughly five sales per independent variable; is that also correct?
A. My study number two?
Q. Yeah.
A. Okay.
Q. Your impact study number two.
A. Right. That was by Sanders \& Colwell, and $I$ just participated in assistance in that. I did not write the study.
Q. Okay. And would you also agree that it's important in a statistical analysis to remove outliers from the data set you are analyzing to increase the accuracy of the prediction?
A. Correct. And an outlier, to understand that, of course, in real estate is you have to look at the actual sale, examine that sale to determine

1 whether or not it would be an outlier in the greater 2 scheme of the market.
Q. So, in your impact study number one of the Illinois -- of the central Illinois transmission line sales, you had six sales which ranged from 30 acres to 165 acres and you have one sale of 700 -- or I'm sorry, 879.9 acres; is that correct? A. That's correct.
Q. Would you agree that in -- well, let me ask you this. So, in comparing properties in an attempt to isolate the effect of a particular variable like a transmission line, would it be appropriate to include one property out of whatever data set that it was, $I$ believe of eight properties, in which the one property is located directly adjacent to a coal-fired power plant when the rest of the properties that are examined are not?
A. Yes. We examined that. We looked at that and concluded it was.
Q. That it was appropriate?
A. Yes.
Q. Finally, would you -- would you also agree that when performing an appraisal or consultation either with whatever statistical tool that you choose to employ, that it's important not

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to cherry-pick data and to use all of the data
within a given set so that you're not cherry-picking
sales which conform to a predetermined outcome?
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A. Okay. That's kind of a loaded question. The cherry-picking concept is to pick sales that would benefit you, even though there are other sales that may not. However, you do have to understand that when you're looking at sales, there are many factors that you have to put into them to see whether they should be included or not. In our studies we stated what those factors were, what our parameters were, and those sales that fit into those parameters and factors were included.

MR. HARDEN: No further questions. JUDGE BUSHMANN: Did you intend to offer Exhibit 133?

MR. HARDEN: Yes, please.
(Grain Belt's Exhibit 133 was offered
into the record.)
JUDGE BUSHMANN: Are there any
objections to its receipt?
MR. AGATHEN: No, Your Honor.
JUDGE BUSHMANN: Exhibit 133 is received into the record.

1

2 into record.) Landowners? few.

BY MR. AGATHEN of that?
(Grain Belt's Exhibit 133 was received

JUDGE BUSHMANN: Redirect by Missouri

MR. AGATHEN: Yes, Your Honor. Just a

REDIRECT EXAMINATION
Q. With respect to Exhibit 133, that's the document from the North Dakota. Do you have a copy
A. I do.
Q. Could you explain the background of what led to these alleged allegations?
A. Certainly. This was a power line case in North Dakota where the opposing -- there was an opposing appraiser and, of course, I was on the other side. I was giving testimony for the landowner. The power line company went to suit and they lost the suit. The jury did find in favor of the landowner, and after that the opposing appraiser filed a complaint on the encouragement of the power line company's attorney. We have the email with her telling her to do that. So, this complaint really came out of the desire of the power company to, if

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you will, punish me. Also, the desire of the individual to limit competition in the state of north -- North Dakota.
Q. And what's the current status of this complaint?
A. Current status is we're still in the negotiation. We, we hold and contend and we have very significant proof that we did the appraisals correctly or I did the appraisals correctly, that the potential errors that the board saw, notice they word -- used the word "may" and "potential" in there or "probable," that they are not viable in their argument. We have already employed a USPAP expert who has given -- has written us an opinion to that effect, as well as other individuals who have given us opinion to that effect. So, we're right now still discussing it with the attorney from the North Dakota board on dropping charges.
Q. Thank you.

Did this particular complaint, I think you said it dealt with valuation of a certain specific piece of property?
A. Yes, it did.
Q. Do any of these allegations have anything at all to do with the evaluation that you

1 did for this case, which was not dealing with a
valuation of a specific piece of property?
A. No, they do not.
Q. Could you explain why?
A. Well, in the complaint in North Dakota was specific to the property that $I$ was valuing or appraising. What I'm doing here is a consulting. Consulting is looking at the broader picture and really to the question does high voltage transmission lines impact property value, in specific agricultural property value, for almost all of the properties that are being dealt with on this line deal with agricultural properties and not urban, suburban or, you know, those type of residential properties. So, this is an opinion of the impact. The other would be an opinion of value.
Q. Thank you.

Do you recall some questions dealing with a perception of the electric magnetic fields and the impact that public's conception might have on property values?
A. I do recall a question about public perception, yes.
Q. Do you have any doubt based on your professional experience that a significant portion

1 of the public have a concern with the impacts of HV
2 trans -- HV transmission lines based on health
3 concerns, whether legitimate or not?
A. That topic comes up on a regular basis.
Q. And so, there is a public perception that, in some people's mind at least, that there is a danger?
A. Yes.
Q. And what impact, even if there's no foundation for that perception, what impact is that going to have on the property values?
A. Well, the property values that are dealing with agricultural property values, the impact would have -- the biggest concern of those working in and in close proximity to the power lines, that would be the farmers and the farm help. The rural residential, which there are some properties that are being dealing with a rural residential concept, there their concern would be more to their individual health and their children's health.
Q. One other question. You were asked about one of your studies in this particular case where you included property adjacent to the coal plant in your analysis. Could you explain why you

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thought that was reasonable?
    A. Yes. That property was used for purely
agricultural purposes, as were all the other
properties in our analysis and the presence of a
coal plant across the road would not impact the use
of the property for agricultural purposes.
    MR. AGATHEN: That's all I have, Judge.
    JUDGE BUSHMANN: Mr. Kielisch, that
completes your testimony, sir.
    THE WITNESS: Thank you.
    JUDGE BUSHMANN: You may step down now.
You're excused.
    Why don't we take the final MLA witness
before breaking for lunch.
    MR. AGATHEN: MLA calls Mr. Don
    Lowenstein.
        JUDGE BUSHMANN: Do you solemnly swear
        or affirm that the testimony you're about to give
        will be the truth?
            THE WITNESS: I do.
            JUDGE BUSHMANN: You may be seated.
            LOUIS DONALD LOWENSTEIN,
        having been called as a witness herein, having been
        first duly sworn, was examined and testified as
                                follows:
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DIRECT EXAMINATION
BY MR. AGATHEN
Q. Would you state your name and spell it for the record, please.
A. My name is Louis Donald Lowenstein. L-O-U-I-S, Donald, L-O-W-E-N-S-T-E-I-N.
Q. Mr. Lowenstein, did you prepare rebuttal testimony for this case, which has been marked as Exhibit No. 300?
A. Yes, sir. I did.
Q. Do you have a change to make to that testimony?
A. I have a very slight change on page 17, line number 10. I would like to strike the last six words, "GBE after the line is energized," and replace it with, "line during construction," so that it directly answers the question.
Q. If I were to ask you the questions in the rebuttal testimony today, with that change, would your answers be the same today as those set forth therein?
A. Yes, sir. They would be.

MR. AGATHEN: I would offer Exhibit 300 at this time, Your Honor.

| 1 |  | (MLA's Exhibit 300 was offered into the |
| :---: | :---: | :---: |
| 2 | record.) |  |
| 3 |  | JUDGE BUSHMANN: Any objections? |
| 4 |  | Hearing none. 300 is received. |
| 5 |  | (MLA's Exhibit 300 was received into the |
| 6 | record.) |  |
| 7 |  | JUDGE BUSHMANN: Cross-examination by |
| 8 | Show Me Landowners? |  |
| 9 |  | MR. LINTON: No questions. |
| 10 |  | JUDGE BUSHMANN: Rockies Express? |
| 11 |  | MS. GIBONEY: No questions, Judge. |
| 12 |  | JUDGE BUSHMANN: Commission staff? |
| 13 |  | MS. ASLIN: No questions. |
| 14 |  | JUDGE BUSHMANN: MIEC? |
| 15 |  | MR. MILLS: No questions. |
| 16 |  | JUDGE BUSHMANN: Infinity Wind Power? |
| 17 |  | MS. PEMBERTON: No questions. |
| 18 |  | JUDGE BUSHMANN: Wind on the Wires? |
| 19 |  | MR. BRADY: No questions, Your Honor. |
| 20 |  | JUDGE BUSHMANN: MJMEUC? |
| 21 |  | MR. HEALY: Just a couple, Judge. |
| 22 |  | CROSS-EXAMINATION |
| 23 | BY MR. H |  |
| 24 | $Q$. | Mr. Lowenstein, how are you doing today, |
| 25 | sir? |  |

A. Fine. Thank you.
Q. You are president of the Missouri

Landowners Association; is that correct?
A. That is correct.
Q. You don't purport to represent the interests of all Missouri landowners, do you?
A. No, sir. Just that -- the members of our organization.

MR. HEALY: That's all I have. Thank
you, sir.
JUDGE BUSHMANN: Grain Belt Express?
MR. HARDEN: Thank you.
CROSS-EXAMINATION
BY MR. HARDEN
Q. Good morning, Mr. Lowenstein.
A. Good morning.
Q. I'm Joshua Harden.

Just very quickly. Now, are you a CPA,

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sir?
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A. I am.
Q. Okay. You're not a licensed real estate appraiser in the state of Missouri; is that correct?
A. No, sir.
Q. And you're not a barred attorney in the state of Missouri either?

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A. I'm a licensed CPA.
Q. Okay. Got you. But you're also -you're not an attorney; is that correct?
A. No, sir.
Q. Thank you.

And I know it sounds silly, but you're not a county assessor, right?
A. No.
Q. And you are aware that county assessors have certain annual educational requirements?
A. For the items that they are required to assess, I would assume that's true.
Q. Okay. Would it be fair to say that much of your testimony is dedicated to the idea that Grain Belt Express cannot or any particular county cannot project what the tax revenues will be from the project in the future?
A. That is a part, but that is not the majority. That is roughly one-third of my testimony.
Q. Okay, okay. And there's a substantial -- would you -- would you agree that there's a substantial amount of your testimony which also deals with the future projection -- let me back up and strike that question.

Your conclusion is that it's very difficult or impossible for property taxes to be predicted for this project, is that right, because you don't know how the business is going to --
A. I don't think $I$ would use the word difficult. They are impossible.
Q. Okay. Fair enough. Fair enough. And much of your testimony is dedicated to agricultural business in northern Missouri; is that also correct?
A. Yes, sir. I spoke about agritourism.
Q. Agritourism, okay.

And would you agree that any specific projection of agricultural tourism in the future would equally be impossible to predict with any degree of specificity?
A. No, I wouldn't agree with that.

MR. HARDEN: Okay. I have no further questions.

JUDGE BUSHMANN: Questions?
Redirect by Missouri Landowners.
MR. AGATHEN: Thank you, Judge. Just one question.

REDIRECT EXAMINATION
BY MR. AGATHEN
Q. Mr. Lowenstein, you were asked if you are a county assessor, which you said you are not, correct?
A. That is correct.
Q. Did you attempt to overcome your lack of experience in that area by consultation with the state tax commission?
A. Yes, sir. A big part of my business that $I$ do every day is of a consultive nature and it's based on obtaining facts, focusing on the objective of the problem, looking at options, drawing conclusions. And for the purpose of this testimony $I$ spent a significant amount of time with the Clinton County Assessor, Clinton County Collectors and the Missouri State Tax Commission.
Q. Could you describe briefly your communications with the state tax commission.
A. Sure. I had a working relationship with one of the primary people on the Missouri State Tax Commission. That person didn't guide me through my testimony, but, in fact, provided factual feedback and framework for me to work within.
Q. To look at the correctness of your

## testimony?

A. Correct. Every word of my testimony was reviewed by the Missouri State Tax Commission for factualness.

MR. AGATHEN: That's all I have, Judge.
JUDGE BUSHMANN: Thank you, sir. That
completes your testimony. You're excused.
THE WITNESS: All right.
JUDGE BUSHMANN: Let's break for lunch
right now. We'll be in recess until 1 o'clock.
(A lunch recess was taken.)
JUDGE BUSHMANN: All right. Let's go
back on the record.
We are ready for our final witness.
And, Mr. Linton, you want to start your --
MR. LINTON: Yes. I got some questions
remaining on laying the foundation.
JUDGE BUSHMANN: Yes. Why don't you start from the top.

GLEN JUSTIS,
having been called as a witness herein, having been first duly sworn, was examined and testified as follows:

## DIRECT EXAMINATION

BY MR. LINTON
Q. All right. Would you, please, state your name for the record.

JUDGE BUSHMANN: Just a second. Just a reminder, Mr. Justis, you're still under oath.

THE WITNESS: I understand.
JUDGE BUSHMANN: Okay. Go ahead.
Q. (By Mr. Linton) Please state your name for the record.
A. Glen Justis.
Q. And would you state your employer.
A. I'm self-employed by a firm Acclaim Strategies, LLC.
Q. Now, have you before you what has been marked as Exhibits 400 proprietary and 405-HC, as well as 420?
A. I believe so, yes.
Q. Did you prepare all of these exhibits?
A. I did.
Q. Do you have any changes to make to the totality of these exhibits?
A. I have the changes that I proposed earlier today and I would still like to, to offer those as, as, as corrections.
Q. And if I were to ask you the questions contained in the testimony today, would your answers be the same as, as adjusted by Exhibit 420?
A. Yes, they would.
Q. Is your testimony true and accurate to the best of your knowledge and belief?
A. Yes, it is.

MR. LINTON: I offer the testimony into
evidence and offer the witness for cross-examination.
(Show Me's Exhibits 400, 405-HC and 420-HC were offered into the record.)

JUDGE BUSHMANN: Okay. I'm going to take up first 400 and 405. And just to clarify, 405 is HC?

MR. LINTON: Yes.
JUDGE BUSHMANN: I thought that was proprietary, but it's an $H C$ document?

MR. LINTON: Oh, excuse me. I'm sorry. Yes, 400 started out as HC and then --

JUDGE BUSHMANN: So, 400 is proprietary, but not 405?

MR. LINTON: 405 is HC and there -- the court reporter also has a non-proprietary version. JUDGE BUSHMANN: So, are there any
objections to the receipt of Exhibits 400 and 405? Hearing none. Those are received into the record.
(Show Me's Exhibits 400 and 405-HC were received into the record.)

JUDGE BUSHMANN: Now, are there any objections to 420?

MR. ZOBRIST: Yes, Judge. We do object to 420. It is more than an errata sheet. It is a change in testimony. We have not had time to assess it. The witness has had over 30 days since the filing of surrebuttal. We've received no advanced notice of anything and it is unfair at this point to attempt to change testimony on this wholesale basis on the very day that the witness testifies. So, we object to Exhibit 420.

JUDGE BUSHMANN: And, Mr. Linton, your response?

MR. LINTON: Yes. It was a good faith effort to make adjustments that Mr. Justis thought were appropriate in light of Mr. Berry's surrebuttal testimony. Again, it was made in good faith. If applicant had wanted to cross-examine Mr. Justis, this information would have been provided. This just gave applicant an opportunity to review how to
cross-examine Mr. Justis on these issues. JUDGE BUSHMANN: Okay. Well, here's where I am on this exhibit. Under Commission Rule 4 CSR 240-2.130 Section 10 it says that no party shall be permitted to supplement prefiled prepared direct, rebuttal or surrebuttal testimony unless ordered by the presiding officer or the Commission. A party shall not be precluded from having a reasonable opportunity to address matters not previously disclosed which arise at the hearing. I think that this rule applies in this situation. I think it gives the Commission some discretion in what to do with this sort of situation where a correction could step over the line into supplementing testimony.

My opinion is that I've provided Grain Belt Express with a reasonable opportunity to address matters not previously disclosed by giving several hours to review and an opportunity to cross-examine the witness. There is an additional reason why I'm going to admit the exhibit and that is because Mr. Justis has already previously testified that some of the information provided in his testimony is not correct, and I think the Commission has an obligation to use correct information to the extent possible in reaching its

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determination. So, for that reason I'm going to
overrule the objection and receive 420 into the
record of the hearing.
    (Show Me's Exhibit 420-HC was received
into the record.)
    JUDGE BUSHMANN: First cross-examination
would be by Missouri Landowners Alliance.
    MR. AGATHEN: No questions, Your Honor.
    JUDGE BUSHMANN: Rockies Express?
    MS. GIBONEY: No questions, Judge.
    JUDGE BUSHMANN: Commission staff?
    MR. WILLIAMS: No questions.
    JUDGE BUSHMANN: MIEC?
    MR. MILLS: No questions.
    JUDGE BUSHMANN: Infinity Wind Power?
    MS. PEMBERTON: Thank you, Your Honor.
        CROSS-EXAMINATION
    BY MS. PEMBERTON
    Q. Good afternoon, Mr. Justis.
    A. Good afternoon.
    Q. I want to talk to you a little bit about
    the MISO planning reserve requirements.
    A. Uh-huh.
    Q. In your work papers you've assumed a
    capacity factor of 80.5 percent. Is that a correct
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value?
A. For what?
Q. For combustion turbines that would need to be brought on line to offset any wind that would be coming in for purposes of planning requirements.
A. I believe, if I understand what you're referring to, I assumed 80.5 percent, let me think about this for just a moment please, on the combined-cycle plant, which was consistent with Mr. Berry's original testimony. So, I thought that was a reasonable number for that purpose and I accepted it.
Q. And let me make sure that $I$ understand exactly what that means. So, for the purposes of the Infinity contract with MJMEUC, the 200 megawatt of wind that would be coming on line via the Grain Belt Express project, you're suggesting that 160 megawatt of CT would be necessary to support that 200 megawatt of wind, correct?
A. No. If -- I might have misunderstood your prior question. You were referring to the, the combined cycle or the amount of -- in other words, there's the issue of how much credit something is giving versus how much of a capacity cost adder that I had made in my testimony. So, it's unclear to me

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whether we're referring to the capacity amount that
MISO would, you know, credit a resource --
    Q. We'll get to that --
    A. -- a resource such as combined cycle
versus how much they would credit a resource such as
wind, and I honestly don't remember which number
went with which without looking back at my
testimony.
Q. So, if I'm looking at your work papers and it shows me that you have assumed a supplemental capacity requirement percentage of 80.5 percent on your calculated LCOE column --
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A. Okay.
Q. -- in your work papers.
A. So, okay. So, thank, thank you for clarifying.
Q. Sure.
A. So, I be -- so, and I misspoke earlier. That 80 percent, 80.5 percent capacity adder was, was a capacity cost adder on top of wind.
Q. So, is my assumption correct that in order to support, if you have 200 megawatt, does it -- if you have 200 megawatt of wind coming on line, that means that 160 -- if you take that 200 times the capacity factor of 80.5, that means 160

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megawatt of CT would need -- would be necessary?
A. It depends on the -- that's a
utility-specific issue. The -- my understanding of
how the RTO such as MISO applied this planning reserve requirement -- so, they have a planning reserve requirement that might be, let's say, nominally 15 percent. It varies by RTO. Each individual utility is responsible for demonstrating that they have met their capacity reserve margin requirements. So, the RTOs themselves such as MISO, they don't -- they don't specifically impart that penalty, but my, my opinion and the basis for which I've done my analysis assumes the potential buyers, the vast majority of potential buyers would be utilities having an obligation to serve. Those utilities would have an obligation to meet their reserve requirements and if you had an asset that you're considering as an energy asset that only had to begin with, in this case, 19.5 percent credit, those utilities would naturally incorporate the anticipated additional cost to fulfill the remaining amount of capacity.
Q. Well, I'm not asking about cost. I'm just asking you how much CT you think is, is, is necessary based on your work papers. What you

1 assumed in your work papers, an 80.5 percent supplemental capacity requirement. So, am I not correct in saying if you take the 200 megawatt for the PPA between Infinity and MJMEUC and multiply that by your 80.5 percent, that that equates to 160-megawatt of gas that you're suggesting would potentially be required to support that wind?
A. Potentially, but, again, it's a -- it is handled on a utility-by-utility basis.
Q. I understand that. Okay.
A. Yes, yes.
Q. All right. Thank you.
A. Yes. And the purpose of that, to clarify, is to basically to afford the opportunity to compare apples to apples in the LCOE analysis.
Q. Okay.
A. Whether a given utility is -- you know, each utility is its -- is in its own capacity position. So, some may have a short-term surplus, some may have a near-term deficit, whatever it may be, so...
Q. Understood.
A. But the, the, the whole purpose of doing that, which $I$ believe is consistent with the underlying purpose of a levelized cost of energy

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analysis is to put each of those assets on equal footing.
Q. Okay.
A. So, that is the -- that is the logic and the reason why I did that.
Q. Okay. Thank you for that.

MS. PEMBERTON: May I approach the
witness?
JUDGE BUSHMANN: You may.
Q. (By Ms. Pemberton) Would you, please, read into the record the title of --

MR. LINTON: Excuse me.
MS. PEMBERTON: Oh, I'm sorry, Counsel.
MR. LINTON: May I have a copy?
MS. PEMBERTON: I'm sorry, Counsel.
Yes, you may. I apologize.
Q. (By Ms. Pemberton) Would you, please, read into the record the name of this -- the name of this document.
A. This is the MISO 2016-2017 planning resource auction results dated April 15th, 2016.
Q. Okay. And would you, please, go to -turn to it's -- the number at the bottom is going to be slide eight, but $I$ believe it's the third page in this document.

JUDGE BUSHMANN: And just for clarification, has that been marked already as 877?

MS. PEMBERTON: I have it marked. I haven't introduced it yet. Yes, we had a number change on that exhibit.

JUDGE BUSHMANN: Thank you. Go ahead.
Q. (By Ms. Pemberton) So, are you on --
A. I'm sorry.
Q. -- slide eight?
A. Yes, I am.
Q. Okay. So, on the, the first row on slide eight is identified as the PRMR, which is the planning reserve margin requirements.
A. Uh-huh. And I assume this is -- I have not studied this before. So, I assume this is by zone. In other words, the top, as it says, the top column or the top row is local resource zone.
Q. Right. So, that's my understanding. So, we're looking at the -- if you go to the far right --
A. Yes.
Q. -- far right column on that top line, the PRMR line, and we have a system reserve requirement of 135,483 . Do you see that number? A. I do.
Q. And then the next line directly beneath that is the total offer submitted. So, this is the what's identified there as the FRAP, which is the fixed resource adequacy plan. So, that essentially you would agree with me that that is the amount of capacity that's available for MISO?
A. I assume this -- that would be correct --
Q. Okay.
A. -- for the 2016 and 2017 planning.
Q. Okay. So, if you go to the far right column, we have a number there of 141,524 ?
A. That's correct.
Q. And subject to check on my math, would you agree that the difference between the available capacity for the MISO system versus the planning reserve requirements, that's a value of 6,041 megawatt?
A. That sounds about right.
Q. Okay. So, in other words, there's additional capacity available in the MISO system?
A. For this period of time --
Q. Okay.
A. -- and assuming that I'm understanding this, this report, yes.
Q. Sure. And do you know -- and you would agree with me that Missouri is in zone 5 in MISO?
A. I believe it is, yes.
Q. Well, we can confirm it. If you flip back a page on page 6.
A. I sometimes get these zones mixed up.

Yes.
Q. Yeah. And that's understandable.
A. Yes, Missouri is in MISO zone 5.
Q. Okay. Thank you.

So, if we go to the very bottom row of page 8.
A. Uh-huh.
Q. And we have the auction clearing price per megawatt day.
A. Uh-huh.
Q. And that value for zone 5, if we're looking at the zones up top and we follow $\mathrm{z5}$ down to the bottom, we have a value of $\$ 72$ per megawatt day --
A. That's correct.
Q. -- you would agree with me?

Going back to your work sheet that we were talking about before where we identified the 80.5 percent of the supplemental capacity

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requirement. The line directly underneath that, the
row directly underneath that one is for CT fixed
costs year one in dollars per kilowatt year?
    A. Uh-huh.
    Q. And you have a value of 154?
    MR. BRADY: I'm -- that document is
    highly confidential. So, before you start --
    MS. PEMBERTON: You're right. My
    apologies.
        JUDGE BUSHMANN: Do we need to go in
        camera?
            MR. BRADY: I think. I just want to
        confirm.
            MS. PEMBERTON: Let me -- let me
        confirm.
            MR. ZOBRIST: Yeah. We're okay with
        that number being disclosed.
            MR. BRADY: Isn't it their number or...?
            MS. PEMBERTON: No. I think -- well --
            THE WITNESS: It's actually --
            MS. PEMBERTON: It's theirs.
            MR. ZOBRIST: I think we provided the
                number and he used it.
            MR. BRADY: Okay.
            Q. (By Ms. Pemberton) So, we're at the 154
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1 per kilowatt year?

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A. Uh-huh.
Q. So, I'm going to do a little math on the fly here. So, if we go back to the slide eight, the \$72 that is the auction clearing price for zone 5 of MISO and that, that value is -- I'm going to have to convert it, right, because it's in megawatt per year -- or per day. So, I would take the $\$ 72$ times 365 days of the year to get a megawatt year value of 26,280. Does that sound reasonable?
A. I'd have to confirm that, but I suppose so.
Q. Okay. Subject to check then.

So, then I would divide that. In order to get to an equivalent kilowatt year value, I'd have to divide that by 1,000 ?
A. Uh-huh.
Q. And so, when I do that, I get a value of \$26.28?
A. Subject to confirmation.
Q. Okay. So, essentially, what I'm looking at in comparing it to your $\$ 154$ per kilowatt year versus the actual zone Z 5 MISO , what they value as the clearing price of $\$ 26.28$, correct?
A. I'm not ready to agree to that.
Q. You would agree with, subject to check on my math, though?
A. Subject to check. I mean, I actually, as part of my work on this, this case, had reviewed this and had -- wasn't actually curious and actually one of the questions in one of the data requests was, well, what if -- what if the capacity was priced at the, you know, the recent auction prices and when $I$ recall doing the math $I$ don't remember coming up with a number that that was that different from the 154. So, subject to check, yes.
Q. Okay. But you didn't disagree with the steps that we just went through? We would take $\$ 72$ times 365 days in a year to convert that to a megawatt year and then whatever that megawatt year value is I would then divide that by 1,000 to convert it into kilowatt hour -- kilowatt per year? That --
A. I think that's right.
Q. Mechanically that works?
A. I think so, yes.
Q. Bear with me here.

And so, what portion of the -- when
you've done your LCOE calculation, what portion of that or what percentage did you attach on the

## weighting of that $\$ 154$ value?

A. I don't follow your question.
Q. So, what --
A. It depended on which -- so, what I assumed was the value that also was utilized by Grain Belt for sake of convenience for the lack of a better term, I believe that number was, was reasonable based on a long-term perspective on what, you know, what the all-in cost of a combustion turbine would be and then that value was applied to each individual resource, including the combined cycle resource based on whatever the additional capacity that was needed.
Q. So, does it represent, like, 30 percent of your overall LCOE value? 60 percent? I mean, what -- how is that --
A. It really varies by plant. One of the things that's interesting is that by virtue of the inherent nature of an LCOE calculation, you're dividing by megawatt hours, which is determined by capacity factor times nameplate. Right? So, so --
Q. Well, I guess what --
A. -- depending on the resource the percentage that that makes up can vary.
Q. Okay. Well, you've stated a value of

190 -- what is your value here? I believe it's 2 97.03, but that would be subject to check. Just a 3 minute.

So, this is on your errata sheet that I'm referencing that we just had admitted. And so, based on your updated numbers -- and this is I believe the last page on your summary of corrections and your table. It would actually be the first page. My apologies. It would be the table on the front. And you've got in your row four for wind capacity overbuild you have a value of 93.77. I guess my question is: What percentage of the \$154 that you've assigned --
A. I'm not -- I'm not following this. I do apologize.
Q. Do you need me to point you to where I'm talking about on your page?
A. That would be helpful, please.
Q. Okay. So, I'm looking at the exhibit that we just entered in, and this is your --
A. Oh, okay.
Q. -- summary of corrections and table.
A. Yes.
Q. And so, on row four or what I have identified that looks like it's numbered as row

1 four, the wind capacity overbuild?
A. Uh-huh.
Q. If you go over and you've got the -- if you look at the columns up at the -- the columns up at the top, this one is headed Kansas wind via GBX.
A. I'm following you now.
Q. You follow that down.
A. Yes.
Q. So, I have a value -- or your updated value of $\$ 93.77$.
A. Uh-huh.
Q. And my question is: How much of the \$154 that you've assigned in your calculation makes up and comprises that 93.77?
A. I'm not sure it's a significant portion. I would have to go specifically look at it.
Q. Okay. So, is 60 percent reasonable? 70 percent?
A. I think that would be a little bit high.

I mean, if you want, we could calculate it on the fly, but...
Q. I'm happy to let you.
A. So, but I don't think I have that -- I don't think I have that broken out, that particular component of the cost broken out on a per megawatt

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hour basis explicitly. So, it would be difficult
    for me to, you know, to go through those
    calculations.
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Q. Okay. But you wouldn't disagree with me that a 60 percent value probably -- I won't go to 70 , but say 60 percent would be reasonable if it's a significant amount of --
A. I'd say 50 percent might be more correct.
Q. Okay. And how would we calculate exactly what that value is? Can you calculate that for us, please?
A. I can try.
Q. Okay.
A. It will take a moment or two.
Q. That will work.
A. Is that all right?
Q. Yes, please.
A. It's actually 34 percent.

So, when I look at the delta -- in other words, if $I$ were to remove the capacity cost adder and recalculate the LCOE, leaving everything else constant, the LCOE goes from 93.77 down to 62.20 and, so, that delta then divided by the 93.77. I believe you asked me what, what was it as a

| 1 | percentage of the 93.77. |
| :---: | :---: |
| 2 | Q. Uh-huh. |
| 3 | A. I get 34 percent. |
| 4 | Q. Okay. All right. Thank you for that. |
| 5 | MS. PEMBERTON: At this time I would |
| 6 | like to move to have Exhibit 877 admitted into the |
| 7 | record. |
| 8 | (Infinity's Exhibit 877 was offered into |
| 9 | the record.) |
| 10 | JUDGE BUSHMANN: Any objections? |
| 11 | MR. AGATHEN: Yes, Your Honor. I |
| 12 | haven't seen a copy of it yet. |
| 13 | MS. PEMBERTON: My apologies, |
| 14 | Mr. Agathen. |
| 15 | MR. AGATHEN: No objection. |
| 16 | JUDGE BUSHMANN: 877 is received into |
| 17 | the record. |
| 18 | (Infinity's Exhibit 877 was received |
| 19 | into the record.) |
| 20 | MS. PEMBERTON: Let me give staff a |
| 21 | chance to weigh in real quick. Sorry. |
| 22 | MR. WILLIAMS: No objection. |
| 23 | JUDGE BUSHMANN: Counsel from any other |
| 24 | parties have objections? |
| 25 | Very good. Do you have any further |

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questions, Ms. Pemberton?
    MS. PEMBERTON: I have no further
    questions.
    JUDGE BUSHMANN: Thank you.
    Any questions from Wind on the Wires?
    MR. BRADY: Yes, Your Honor.
        CROSS-EXAMINATION
    BY MR. BRADY
    Q. Good afternoon, Mr. Justis.
    A. Good afternoon.
    Q. I am Sean Brady. I am attorney for Wind
on the Wires and The Wind Coalition.
    How are you today?
    A. I'm well. Thank you.
    Q. Good. Turning to, let's see, the
materials you prepared, the supplemental materials
that you prepared today, Exhibit 420, sir, that I'm
holding up here today.
    A. So, is that the --
    Q. Yeah.
    A. So, that is No. 420?
    Q. Yes.
    A. Thank you. I'm having trouble keeping
        track of the exhibit numbers.
    Q. Sure.
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            A. Yes, No. 420.
            Q. The third sheet, schedule PJGJ-01 we've
already -- this is -- counsel?
                            MR. LINTON: Oh.
                            MR. BRADY: This sheet.
                            MR. LINTON: Okay. Thanks.
                            MR. ZOBRIST: And Judge, pardon me.
Mr. Brady just kind of reminded me of something.
    I'm seeing attached to Exhibit 420 are two tables,
    one and two, and they do contain highly confidential
    information. So, if there's any --
            MR. BRADY: I'm going to -- go ahead.
        I'm sorry.
            MR. ZOBRIST: Well, if there's any
    inquiry on that, we need to go into in camera, and
    then this exhibit should be marked as an HC or at
    least two versions provided to the Commission.
                            JUDGE BUSHMANN: And you're referring to
    these --
    MR. ZOBRIST: To exhibit --
    JUDGE BUSHMANN: -- the schedules?
        MR. BRADY: Yes.
        MR. ZOBRIST: Well, it's actually --
        JUDGE BUSHMANN: One schedule.
        MR. BRADY: Schedule P -- it's
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identified at the top schedule PGJ-01 highly
    confidential, corrected in red.
    JUDGE BUSHMANN: All right. Then I'm
going to change the classification of this entire
exhibit and it will now be Exhibit 420-HC. And
parties will just need to let me know if we need to
go in camera to talk about any of that.
    MR. WILLIAMS: And Judge, are you, I
    guess, directing Show Me to provide a non-HC version
    as well?
    JUDGE BUSHMANN: I think for --
        MR. LINTON: I would -- I would suggest
        mark the entire thing as HC because it's --
    JUDGE BUSHMANN: I think --
    MR. WILLIAMS: I mean, at this point,
but the entirety is not HC, is it? It's only those
        two schedules that are confidential, correct?
                            MR. LINTON: I'll leave that up to Grain
        Belt. If they want a non-HC version, we can provide
        that.
            MR. WILLIAMS: Well, the way I look at
        it is the public ought to see as much of the
        document as it can.
                            JUDGE BUSHMANN: I don't -- since this
        was an errata sheet exhibit during the hearing, I
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1 don't think that we need to have an NP version. So,
2 I think just changing classifications is going to be sufficient.

MR. BRADY: And then to the point that Mr. Zobrist raised about talking about potentially confidential, my line of inquiry is just going to refer to the 80.5 credit, so that is a public number.

MR. ZOBRIST: That's correct.
MR. BRADY: And see how far we can get with, with that and try and stay out of in camera.
Q. (By Mr. Brady) So, Mr. Justis.
A. Yes.
Q. Ms. Pemberton -- Ms. Pemberton was just asking you questions about the 80.5 percent capacity credit.
A. Well, it's an adder. It's an adder.
Q. Okay. Capacity value adjustment. I believe you have it identified in the -- in the table.
A. Which particular line item, please?
Q. So, we're on schedule PGJ-01 of Exhibit 420-HC.
A. Yes.
Q. And it is line 1 under input

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assumptions, it says capacity value adjustment.
    A. Okay.
    Q. Right?
    A. Let me see here. Yes, yes.
    Q. Is that what you're calling the 80.5 --
    A. Yeah, yeah. Well --
    Q. -- percent as well as a --
    A. No, no. May I clarify?
    Q. Well, I guess I just want to -- we're on
80.5 percent and I guess I'm going to ask you --
    A. 80.5 percent was the capacity added on
top of wind.
    Q. Okay.
    A. This value here and I think if I'm
understanding which one you're -- wait. Are you
looking at the first line of the first page or the
    first line of the second page?
                            MR. BRADY: May I approach the witness,
Your Honor?
            JUDGE BUSHMANN: Yeah.
    A. I just want to make sure I'm answering
    the right question.
    Q. (By Mr. Brady) This line right here.
    A. Oh. Yes, thank you.
            MR. BRADY: Mr. Linton, what I showed
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him was right here.
MR. LINTON: Okay.
MR. WILLIAMS: May I inquire is this
from table one or table two?
MR. BRADY: Down at the bottom. You're

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right, table --
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THE WITNESS: It's the first table.
MR. BRADY: Table one.
THE WITNESS: Yes. For the first table under PGJ-01.
Q. (By Mr. Brady) So, that is a -- I'm sorry. Can you repeat what you just said? You clarified that this is a capacity generation in addition to wind?
A. Right. So, this first table, just to clarify if it's valuable, is everything on this one page relates to the wind example and, as indicated in the title, these are the adjustments I made to Mr. Berry's model when I went through to validate my calculations to basically compare the models using similar inputs, similar methodologies to confirm that the numbers came out about the same. And so, so, yes, Mr. Berry had, had incorporated what I believe was a 19.5 percent capacity credit and my view is we need to take the inverse of that, which
would be basically one minus 19.5 percent, which gets you to 80.5 percent.
Q. And so, that's to make wind equivalent to natural gas, correct?
A. Well, it's basically to put all the options that were analyzed under the LCO -- LCOE analysis on an equivalent basis where that it had -so that 100 percent of the nameplate basic capacity was all accreditable as dispatchable capacity by MISO.
Q. Okay.
A. Okay.
Q. So --
A. So, that logic applied to all the different resources in the LCOE.
Q. So, is it -- is it your understanding that wind energy delivered via the Grain Belt Express could be sold -- or purchased by utilities in MISO or PJM?
A. Could you repeat, please?
Q. Is it your understanding that the energy from -- delivered through the Grain Belt Express could be purchased by utilities in MISO or PJM?
A. Certainly, assuming it was constructed as planned.
Q. And that it could be purchased -- it could be purchased for a wind RFP?
A. What do you mean for a wind RFP?
Q. If a utility were to issue a request for proposals for wind energy --
A. Yes.
Q. -- this could be used for that?
A. Absolutely.
Q. And in that instance your capacity credit wouldn't be -- your adjustment here would not apply?
A. I disagree with that.
Q. And why?
A. Because the utility will still have to adhere and comply with its total reserve margin requirement. So, the -- assuming in the longer term when, you know, predominantly utilities are short capacity, we have to distinguish between the position in the next one or two or three years versus what's going to happen, you know, 20,25 years out. Those utilities may, in fact, go through an RFP process, purchase that wind energy, but they're going to then have to think about, well, where do I get my capacity from to meet my reserve requirements. So, they can treat those separately,

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but, but from the per -- but from the perspective of them evaluating that RFP compared to other
alternatives, they're going to -- they're going to have to include the fact that that wind energy they're receiving does not include significant dependable capacity credit, because they're going to compare that against other options that do.
Q. But they've already made that comparison prior to issuing a wind RFP?
A. Maybe.
Q. Well, if they're -- all right. If it's an RFP for wind, it's for wind energy?
A. Uh-huh.
Q. Not for wind energy plus gas, under my assumption?
A. Yes, but they would have -- they would have made that determination as part of a broader resource plan and in that case they might have decided to separate their purchase of capacity from their purchase of energy, but I think in all circumstances they were going to consider one way or the other the impact of the fact that the wind does not have dispatchable capacity of significance.
Q. But I guess the question I had was in a -- if a utility was issuing a wind RFP, the bids

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that were coming in --
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A. Uh-huh.
Q. -- would not be including the addition of your capacity value adjustment?
A. That's probably correct, yes.
Q. Did you happen to see, review Mr. Goggin's surrebuttal testimony?
A. Yes, I did review Mr. Goggin's or I read through it. I didn't study it in detail.
Q. Okay. And Mr. Goggin -- give me a second.

And Mr. Goggin challenged your wind energy capital cost, correct?
A. Yes, he did.
Q. And he had cited updated data from EIA?
A. I didn't see significant reference to updated data from EIA.
Q. Okay.
A. Maybe I -- maybe I'm missing it. I actually do have that -- is this the cross surrebuttal testimony?
Q. Yes. And it should be page 4.
A. So, right. So, that 18.77 comes from the, the latest version of the EIA report that $I$ had.

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            Q. And his -- and if you look down to line
    83, 82 and 83.
                            MR. LINTON: Just to -- just to
    interject here.
                            THE WITNESS: I'm sorry. I'm sorry.
                            MR. LINTON: Are there confidential
    information here that you need to be concerned
    about?
    MR. BRADY: This confidential
    information was -- you had -- you had produced a
    spreadsheet with the wind energy capital costs, that
    whole -- that whole spreadsheet was identified as
    confidential, but that's public.
    MR. LINTON: I'm just -- I'm just --
    okay. I'm just --
    MR. BRADY: I appreciate that. And
    plus, I was going to read from nonconfidential.
    MR. LINTON: Just raising the question.
    MR. BRADY: Thank you.
    Q. (By Mr. Brady) So, on -- you have
    Mr. Goggin's cross surrebuttal testimony in front of
    you?
            A. I do. What page was that again? Page
        8?
            Q. Page 4.
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A. Page 4. Excuse me.
Q. Lines 80 to 83.
A. Got it.
Q. And starting on line 81 it says specifically the actual national average overnight capital cost in that document is $\$ 1,686$ per kilowatt, while the regional cost for wind projects in $\operatorname{SPP}$ is lower at $\$ 1,536$ per kilowatt and he cited updated data as of January 2017 in footnote 5. Do you see that?
A. I do see that.
Q. Did you rely on the updated data from January 2017?
A. No, I did not. I relied on data that was in the report from November I believe it was.
Q. Okay. Thank you. Moving on to a different topic.
A. Uh-huh.
Q. Going back to Exhibit 420, the table we were at before, table one.
A. Yes, sir.
Q. Let me know when you have that in front of you.
A. Table one of PGG -- PGJ-01?
Q. Yes.

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A. Yes.
Q. So, you've got Item No. 5 in the far left-hand column?
A. Uh-huh.
Q. Do you see that?

And it's described as wind energy production tax credit phase-out factor?
A. Right.
Q. And the next column says Mr. Berry's value was 80 percent?
A. Uh-huh. Yes, I see that.
Q. Do you have -- do you dispute the calculation as beyond -- strike that.

Do you dispute the value that Mr. Berry calculated at 80 percent? I realize you think it should be at 60 percent, but the value at 80 percent, do you think his testimony is correct on that?
A. Well, I think his -- I think his original testimony was correct. I mean, in other words, I think he -- I think he properly applied the 80 percent.
Q. Correct. That's what -- I just wanted to see if you agreed --
A. Right, right.

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Q. -- with those numbers. I understand you think --
A. Right.
Q. -- there should be a different value.
A. There are other changes here embedded there, right.
Q. Okay. Thank you.

MR. BRADY: Those are all the questions
I have, Your Honor.
JUDGE BUSHMANN: Cross-examination by
MJMEUC?
MR. HEALY: Yes, Your Honor.
CROSS-EXAMINATION
BY MR. HEALY
Q. Mr. Justis, how are you doing this

## afternoon?

A. I'm doing well. Thank you. How are you?
Q. Doing well.
A. Good.
Q. I'd like you to start on page 4, lines 9 through 10 in your surrebuttal, please.
A. Well, bear with me a moment. Oh, here it is. That reference again, please.
Q. Page 4.

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A. Yes.
Q. And lines 9 through 10.

Do you still stand by your opinion that the Iron Star and GBX contracts are of questionable economic value or viability?
A. My, my -- well, I do in the context of what I meant by this statement, yes.
Q. And you reviewed the MJMEUC Iron Star contract, correct?
A. I did.
Q. And the MJMEUC GBX transmission service agreement, correct?
A. I did.
Q. Those contracts viewed by themselves, high capacity wind contract 20 year with 2 percent annual adders, would you agree standing by themselves, that represents a good deal?
A. I do not dispute that the deal that has been on the table for MJMEUC is a good deal.
Q. Okay. And you would expect that if the opportunity arose for MJMEUC and the line was built that MJMEUC would exercise all the options available to it to complete that deal, wouldn't you?
A. I do not have an opinion on that because I don't know what other options MJMEUC may have.

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    Part of my view there rests in the nature of
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    MJMEUC's transmission service agreement which gives
    them the opportunity to take zero quantity. As I
    would --
    Q. That's fine. You can stop there.

Did you hear Mr. Jaskulski's testimony earlier today?
A. I did not.
Q. You were absent when he testified?
A. Partly I was, yes.
Q. Okay. Well, part of his testimony was he thought that MJMEUC was locked into these contracts since we have 100 megawatts now firm commitment from our members. Do you share that commitment that Mr. -- or that opinion Mr. Jaskulski has?
A. I don't without having further details on the specifics of those contractual commitments. I've seen many contracts written in many different ways and, you know, I would have to examine the nature of the contracts.
Q. Would you agree that natural gas prices are currently at historical lows?
A. I don't know that they are historical
lows. They're certainly -- they're low compared to

1 recent years.
Q. Is there a period of time you can point me to when adjusting for inflation they were lower than they are now?
A. I cannot at this point, no.
Q. Would you agree in the past natural gas prices have been higher?
A. They have at times, yes. At times they have been quite a bit higher.
Q. Would you agree that natural gas at least in the past has been subject to price volatility?
A. Absolutely.
Q. Would you agree that natural gas prices could increase in the future?
A. Yes.
Q. When you did your analysis and gave your testimony, you didn't attempt to address the benefits of wind energy, did you?
A. I don't follow the question. It seems open ended. The benefits with respect to what?
Q. It's actually off a DR you'd previously answered. Some of the benefits of wind energy, of course, are the fact of its low emission profile, low price volatility for fuel, talk about some of

1 the benefits of wind energy as well as the demand
2 for renewable energy by many corporations and
3 individuals. And my question is simply the point
4 when you gave your analysis did you include those
5 additional benefits of wind energy in your analysis
6 when concluding the value?
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A. I did not.
Q. Okay. If I can turn you to your rebuttal testimony on pages 10 and 11 , please. Actually, just page 10.
A. Yes.
Q. And you caused a -- and sort of even kind of ran over it with going here. You performed a LCOE study when you did your testimony; is that correct?
A. That's correct.
Q. Okay. In figure 3 is it true that you showed Kansas wind via the Grain Belt Express to be the lowest cost option among the wind renewables that you compared in that particular comparison?
A. That is true with the assumption, and I think this is an important point, in my analysis I assumed a new dedicated AC line would have to be built for those Iowa and Missouri options, which may or may not be actually true in reality.
Q. But you did come to the conclusion that Kansas wind via GBX was the cheapest of the alternatives presented, correct?
A. The cheapest of these three that I analyzed, yes.
Q. And again, in that particular analysis you didn't consider emission costs or values associated with rex or any other attribute of wind energy?
A. That is correct.
Q. I'd like to have you turn to page 14 of your rebuttal.
A. I'm there.
Q. Okay. If you look at figure 4.
A. Uh-huh.
Q. And you, again, came to the same conclusion, is that correct, regarding the three wind alternatives in that particular figure, that Kansas wind via GBX was the cheapest alternative?
A. That, that is -- that is correct, again, with the same assumption that $I$ mentioned earlier. My -- there's a little bit of an apples-to-oranges comparison here. Again, the purpose of this figure is to attempt to show the level of matching between my model and Mr. Berry's model when you incorporate

1 equivalent assumptions. However, I believe in
2 Mr. Berry's model he did not have transmission costs
3 associated with the Missouri wind option. So, you
4 do see a larger discrepancy between my value, which
5 is that kind of yellow bar it says 146.79 versus
6 122.35. But the bottom line is, to answer your
7 question, yes, assuming that new lines were
8 necessary, new dedicated lines were necessary for
9 Iowa and wind, they, according to this, they would 10 be more expensive.
Q. Okay. Thank you, sir.

On lines 4 and 5 of the same page when you performed your LCOE study, you said you submitted the, quote, correct methods and input values into Mr. Berry's model. Is that correct?
A. That's what it states here, yes.
Q. Okay. Those changes are represented on what's been marked your schedule PJG-01 that's marked HC?
A. Yes. The -- and that would, of course, be the corrected version.
Q. Okay. Now you can turn to page 6 of your surrebuttal, please.
A. Yes.
Q. You stated in lines 20 to 21 that there

1 were, quote, many other alternatives exist to 2 MJMEUC's PPA with Iron Star; is that correct?
A. Yes.
Q. But you didn't perform any outside analysis other than what was contained in the testimony from MJMEUC as what those alternatives may be; is that correct?
A. I did not perform any such analysis, no. Well, let me -- let me back up a little bit. In my -- in figure 1 on page 11 there's limited analysis of alternatives, but the context of this statement here was really referring to the fact that to determine what is claimed to be a $\$ 10$ million savings, you have to have a clear idea of what that next best alternative is and my view was that there wasn't sufficient information on really what that next best alternative.
Q. But you stated there was other alternatives, but you failed to do the analysis of those other alternatives, correct?
A. I did not do any analysis beyond what is already in the surrebuttal.
Q. Would you agree with me that congestion pricing can be somewhat accurately predicted up to five years out?
A. Somewhat accurately predicted up to five years out? I think that's -- in my view, that's a stretch.
Q. Okay.
A. I think -- I think you can -- I think you can predict it maybe one or two years out, but the inherent nature of congestion pricing, which is driven by LMPs, is volatile and it's difficult to forecast in general. So, in my view, once you reach kind of that four or five, six year period it really becomes more questionable.
Q. Do you have your data request in front of you by any chance?
A. I do have my data request in front of me.
Q. If I can direct you to PGJ No. 17.
A. Bear with me. I need to find the --
Q. And I can bring it to you.
A. -- the MJMEUC ones.
Q. Correct. Yes, sir.
A. This is in the -- this is in the first data request?
Q. I believe so. Yes, sir.
A. Well, okay. So, there's HC and non-HC. I'm sorry. Which number again?
Q. Number 17.
A. Yes, I have that in front of me. Is this the one regarding rex?
Q. No. That's PG -- or PJ 17. This is PGJ
17. I looked at the wrong one as well at first. I can bring it to you if you would like me to.
A. That would be fine, if you don't mind.
Q. It's at the bottom of the page.
A. Yes. Thank you.
Q. Okay. Could you read the first three sentences of that answer to PGJ 17?
A. Where it begins it depends?
Q. Yes, sir.
A. It depends on the time horizon. Congestion costs are difficult to forecast as stated by Mr. Grotzinger on page 5, line 23 in his rebuttal testimony. In my view, for periods beyond five years out, I do not believe congestion costs should be included.
Q. And that's your answer to that data request, correct?
A. That is correct.
Q. When you looked at Crystal Lake in your surrebuttal, did you do any congestion analysis of that scenario?

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A. I did not. At least $I$ don't believe I did.
Q. Okay. Crystal Lake is where Crystal Lake one, two and three wind projects were located?
A. I'm sorry?
Q. Oh, is Crystal Lake where Crystal Lake projects one, two and three, northern Iowa, is that where they're located?
A. I believe so. I didn't hunt it down on the map.
Q. And without getting into HC numbers, one of the criticisms in your surrebuttal is that Mr. Grotzinger failed to consider congestion costs for delivery within MISO of Grain Belt Express. Did you have the opportunity to review what was marked schedule JG 8, highly confidential, in Mr. Grotzinger's testimony?
A. Not that I -- not that I recall. I'd have to see it.
Q. Okay. You have a fairly high familiarity with MISO and the markets contained therein?
A. Reasonably high. I wouldn't say I'm an expert specifically at how MISO operates, but I'm knowledgeable.

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Q. Okay. Are you familiar with congestion issues at Crystal Lake?
A. I'm familiar that there are congestion issues. Not specifically, though, what those levels are surrounding Crystal Lake.
Q. If I can turn you back to your surrebuttal.
A. Yes, sir.
Q. Page 10, line 14.
A. Yes.
Q. You state that Crystal Lake three has a starting price of $\$ 19.55$ per megawatt hour; is that correct?
A. That's what's -- that's what's written here, yes. That's what $I$ believed at the time.
Q. And is that what you believe today?
A. I believe that's correct. If that's -if $I$ wrote the contract correctly.
Q. If I were to tell you that was the price in 2016, not the price in 2021, would that change your opinion as to what that price should be?
A. Does --
Q. You can strike the question. I phrased that poorly.

The 19.55 price, would it be fair to say
that represents the price in 2016?
A. I don't recall specifically when that -when that began.
Q. Do you know what the price for Crystal Lake three is in 2021?
A. I do not.
Q. If I can direct you to your schedule PGJ-03, Exhibit F, it's just about the last page in that schedule.
A. Schedule P -- I'm sorry. PGJ.
Q. Number 3. It's the Crystal Lake contract that you had attached to your testimony.
A. I apologize. I don't -- attached to my surrebuttal?
Q. Yes, sir.
A. Apparently, I do not have that attached.
Q. I think your attorney's approaching to hand that to you.
A. Thank you.
Q. And you see where it says Exhibit F, fixed rate?
A. I do.
Q. And it says contract years one through 16, corresponding prices next to them?
A. Yes.
Q. And if I were to tell you that year one was 2016 through the summer of 2017 , and then each year after that was a one year set-off, would you have any reason not to believe that?
A. I would not, no.
Q. So, if you look at line 6 would actually be December 2021 and that contract price is $\$ 21.58$ per megawatt hour?
A. That's what I see here, yes. Is that when the contract begins?
Q. That's actually when the GBX Iron Star contract begins.

And we're trying to compare apples to apples here, correct, sir?
A. Yes. In general, I would agree with that.
Q. So, it would be fair to examine the same time periods, correct, for the pricing of the contracts when you're trying to compare energy sources?
A. Yes.
Q. Okay. I'm going to turn you to page 11 of your surrebuttal, table one.
A. Table one, yes.
Q. Yes, sir. And you say Crystal Lake

1 three delivered into MISO and that tables says
2 \$19.55; is that correct?
A. Yep, that's right.
Q. From what I told you, would you agree it should be say $\$ 21.58$ if you're looking at a 2021 scenario?
A. I agree.
Q. And the 21.58 price is higher than both Iron Star analysis one, MJMEUC tranche one, and MJMEUC tranche two rate, correct?
A. I'm sorry. Please -- I was trying to track where you were on the table. Please repeat the question, if you may.
Q. The 21.58 price associated with Crystal Lake, is that price higher than both the MJMEUC alternatives on that same table?
A. Yes.
Q. And you would agree with me that the MJMEUC alternative is actually cheaper than Crystal Lake three, correct?
A. I would, yes.
Q. Okay. But when you're determining the actual cost of energy inside an RTO, there's more than the contract price, would you agree with that?
A. I'm sorry. When you determine what?

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Q. The actual price of energy. You have your contract price for the energy --
A. You mean the price of energy for the buyer or just the general wholesale market?
Q. Both. Let me take a step back. I understand your question.

What's an LMP?
A. It's the price of a particular node. It's the marginal cost of energy at that moment in time.
Q. Okay. And usually when you sell energy to a load-serving entity, you have an injection point which is where you sell the energy; is that correct?
A. Well, you have an injection point where you receive the energy and then you have a delivery point where it's taken off the load.
Q. All right. Thank you.

And if you have a contract price for where you receive that energy, you would take the difference of those two, correct? In other words, if your contract price was X , you would have to look at the LMP price to see whether you had a gain or loss on that sale of energy?
A. You would, but you'd also have to think

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about -- assuming you're a load-serving entity,
right. You'd look at that on both ends.
    Q. So, you'd have to look at both ends.
And that's correct.
    A. Which basically would then lead to the
effective congestion charges.
    Q. Thank you. I appreciate it. That saves
    a whole line of questions. You're ahead of me.
    A. Faster's better.
        MR. HEALY: And Judge, I need to go in
        camera at this point.
            JUDGE BUSHMANN: We'll be in closed
    session. Everybody in the audience that's not
    authorized to listen to confidential information
    will need to step outside.
    (REPORTER'S NOTE: At this point, an
    in-camera session was held, which is contained in
    Volume 19, Page 1570 through 1578.)
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(REPORTER'S NOTE: The proceedings
resumed in open session.)
JUDGE BUSHMANN: We're back in open
session.
MR. HEALY: Mr. Justis, would you agree that MISO transmission costs at least on average grow more than 2 percent annually?
A. I haven't specifically seen those, those figures, but I do -- I would agree that they've probably been on the incline.
Q. Okay. The hypothetical we just discussed in camera, without getting into the numbers, you can purchase FTRs. What's FTRs?
A. It's a firm transmission right.
Q. And you can do that to create a hedge against LMP price differentials, correct?
A. In general, yes, you can.
Q. Okay. But you have to pay for those, correct?
A. Well, it depends on the market you're within. Some markets allow either basically FTR forwards or FTR options.
Q. Okay. Do you know what a DNR is? Designated network resource?
A. Oh, yes. Thank you.
Q. Okay. So, you might get some if you make, for instance, a generator a DNR inside of MISO, you might obtain some FTRs that way?
A. Uh-huh.
Q. You would agree with that?
A. Yes.
Q. But you might be lucky to get 40 to 50 percent, would you agree with that, if the FTR is ever needed?
A. Quite frankly, I'm not knowledgeable enough on the specifics of the allocations of FTRS to agree or disagree with that.
Q. All right. Would you be able to state an opinion that on FTRs you're not given by MISO a designation, you have to pay for the market process?
A. General, yes, through an option or something similar.
Q. And those FTR prices, at least usually from my observation, tell me if yours is different, inside the market are based on historical activity to reflect the cost and the value of those FTRs; is that correct?
A. You mean the historical LMPs?
Q. Yes, sir.
A. Generally speaking, yes. I've done

1 recent studies in Texas where clearly the -- in that
2 case it's congestion revenue rights are largely to this earlier and I apologize I've asked this twice.
A. The generator size?
Q. Site. Is there room for additional expansion?
A. Oh, oh, okay. I don't know.
Q. Okay. You would agree, though, that even if there is room for additional expansion there, putting more energy into congested LMP usually results in more congestion; is that correct?
A. Well, if you add -- if you assume you have congestion of -- if you basically have, you know, a region that is already suppressed and you add more, it will become further suppressed.
Q. Okay. Mr. Berry testified earlier that a lot of the best wind sites inside of MISO have already been used and that's why they're congested because they've been built up quite a bit. Would

| 1 | you agree with that assessment? |
| :---: | :---: |
| 2 | A. I haven't specifically studied that. |
| 3 | Certainly there's been significant amounts of |
| 4 | development in MISO, particularly Iowa. |
| 5 | Q. One second. |
| 6 | MR. HEALY: Thank you, Mr. Justis. I |
| 7 | have no further questions. |
| 8 | THE WITNESS: Thank you. |
| 9 | JUDGE BUSHMANN: Mr. Zobrist, I'm |
| 10 | assuming you have fairly extensive |
| 11 | cross-examination? |
| 12 | MR. ZOBRIST: At least a half an hour. |
| 13 | JUDGE BUSHMANN: Why don't we just take |
| 14 | a short break before we get started with that. |
| 15 | We'll be in recess for about ten minutes. |
| 16 | (A short recess was taken.) |
| 17 | JUDGE BUSHMANN: All right. We're back |
| 18 | on the record. |
| 19 | MR. LINTON: Mr. Justis took a few |
| 20 | calculations subject to check. I would like to give |
| 21 | him the opportunity to check those, if he needs to. |
| 22 | JUDGE BUSHMANN: From the previous |
| 23 | cross-examination? |
| 24 | MR. LINTON: Right. |
| 25 | THE WITNESS: I'm unable to do that at |

1 this point.

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            JUDGE BUSHMANN: Okay. Well, let's move
along. We're ready for cross-examination by Grain
Belt Express.
    MR. ZOBRIST: Great. Thank you. Thank
    you, Judge.
            CROSS-EXAMINATION
    BY MR. ZOBRIST
    Q. Mr. Justis, have you ever testified
before the Public Service Commission before?
    A. Not in person.
    Q. So, although you worked for Ameren for
        roughly 15 years, you never appeared before the
        commission during that time?
    A. That's correct. I did submit prefiled
        written testimony I think once, maybe twice in the
        90s.
            Q. Now, as I understand your consulting
        business today, you also work with manufacturing
        professional services, retail services and
        hospitality industry?
    A. To a limited extent. The vast majority
        of my work is with utilities and energy companies.
            Q. Are you aware that a number of
        manufacturing and retail companies have policies
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1 that support the purchase of renewable energy?
A. Yes, sir.
Q. Now, in the course of your consulting business relating to energy issues and when you provide reports and testimony like in this case, you rely upon government reports issued by the U.S. Department of Energy?
A. I have at times, yes.
Q. And, in fact, you've got a map that was published by the national renewable energy laboratory on page 9 of your direct; is that correct?
A. I think so. Why don't I find that to just make sure we're speaking the same language. You mean my rebuttal testimony?
Q. Correct, your rebuttal testimony.
A. And what page is that?
Q. Nine.
A. Yes, sir.
Q. And throughout your rebuttal testimony you have references to the annual energy outlook for the year 2016. It's been published by the U.S. Energy Information Administration.
A. I do have those. I think those references were principally in the context of the

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capital cost estimate and underlying assumptions.
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Q. And they're cited in footnotes to your rebuttal and surrebuttal, correct?
A. They are.
Q. Okay. And you also cite and rely upon reports issued by organizations like MISO, SPP and WECC, $\mathrm{W}-\mathrm{E}-\mathrm{C}-\mathrm{C}$ in all caps, correct?
A. That is correct.
Q. And including companies who have provided services to them like Black \& Veatch?
A. I'm not following that part of your question.
Q. Yes. Black \& Veatch prepared a study for WECC that you cited in your rebuttal testimony, correct?
A. Yes, sir.
Q. Okay, okay. Now, you're familiar with production cost modeling, correct?
A. I am.
Q. And you performed production cost modeling, right?
A. Well, so, production cost --
Q. That's a yes or no, sir. Did you -have you performed production cost modeling?
A. I have performed production cost

1 modeling, yes.
Q. And you did not perform any production cost modeling in this case, correct?
A. That is correct.
Q. And so, you did not provide or perform any production cost model studies or analysis on the affect of the Grain Belt Express project on wholesale prices?
A. That is correct.
Q. Okay. Now, if you'll turn your attention, please, to your rebuttal testimony at page 8.
A. Yes.
Q. If you look at lines 4 and 5, you state that you didn't believe there was a need for the Grain Belt Express service because there was adequate transmission service through the existing RTO structure, correct?
A. That's correct.

MR. ZOBRIST: Nathan, could I ask you
just to go one way a little bit to the left or to the right, please. Pardon me. I'm sorry.

THE WITNESS: That would be good for both of us.

MR. ZOBRIST: Yeah. Thank you. Thank

1 you. Appreciate it.

9 in a way that is more effective than acquiring service through Grain Belt Express?
A. I had not done that in terms of the relevant economics, no.
Q. You did not do that, correct?
A. I did not do that. I believe your question related to the economics.
Q. Right. And this was DR No. 5 that was directed to you, correct?
A. Let me find that just to make sure I'm not misspeaking, please.

MR. ZOBRIST: Just so we've got it, Judge, I'm going to offer, have it marked. I marked it as Exhibit 136.
A. Thank you, sir.

JUDGE BUSHMANN: Your next number was
134.

Do you want to make it 136?

MR. ZOBRIST: Judge, I've reverse numbered. So, I've got 134 and 135 coming up. I got a little confused.
Q. (By Mr. Zobrist) Do you have Exhibit 136 before you, sir?
A. I do.
Q. And in response to Data Request 5 marked PGJ 5, you stated you had not performed the analysis that you were inquired about in that request, correct?
A. That is correct.
Q. Okay.

MR. ZOBRIST: Judge, I move the admission of Exhibit 136.
(Grain Belt's Exhibit 136 was offered into the record.)

JUDGE BUSHMANN: Any objections?
Hearing none. It's received.
(Grain Belt's Exhibit 136 was received into the record.)
Q. (By Mr. Zobrist) And if you'll move down to Data Request $12-\mathrm{B}$, which is on the next page. Do you have that, sir?
A. I believe so, yes.
Q. Okay. It says regarding the statement

1 on page 8, line 9 of your testimony that, quote,
2 there is adequate transmission service through the 3 existing RTO structure, closed quote. You are asked

4 in subsection B is your position that the
5 transmission service referenced in this statement is
6 available today without any transmission upgrades,
7 correct?
A. That's correct.
Q. And your answer was no?
A. That's correct.
Q. And moving down to subpart $D$ of that PJ -- PGJ 12 data request it stated if the answer to part $B$ is no, and you just confirmed it was, correct?
A. That is correct.
Q. Okay. If the answer to part $B$ is no, have you performed any cost estimates of the necessary upgrades, and you stated in response I have not performed such analysis, correct?
A. That is correct.
Q. But is it fair to say that in the work papers and the calculations that you did prepare in this case you accepted Grain Belt Express' estimates of upgrades?
A. I'm not sure. I think there were some

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upgrade costs in there that I -- that I had seen in
the application perhaps.
    Q. You didn't dispute or challenge them,
did you?
    A. I didn't dispute or challenge them. I
    chose to use them for convenience. There's just too
    many -- quite frankly, for analysis there's just too
many separate variables to pick apart every single
    one.
    Q. Okay. Thank you.
    You did not perform your own levelized
    avoided cost of energy in this case, correct?
    A. I did not. My references were to the
    one that was in the EIA study.
    Q. Now, let's move to I think it's
    schedule -- schedule one of your rebuttal and
    although it's marked highly confidential, I don't
    think what I'm going to ask you about is
    confidential.
    A. Let me -- bear with me. I need to find
        that.
            Q. Sure.
            A. I have paperwork everywhere here, sir.
            I'm sorry. That was the first sheet of
        PGJ-01?
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Q. Correct.
A. Yes, sir.
Q. On Item 2.
A. Yes.
Q. This relates to Grain Belt Express capital cost?
A. Yes.
Q. Do you see that, sir?
A. Yes.
Q. Now, you adjusted the capital cost there based upon a WECC, W-E-C-C, transmission expansion planning report that was prepared by Black \& Veatch back in February 2014, correct?
A. That is right.

MR. ZOBRIST: Judge, I've got a full copy of his report, but $I$ was only going to refer to one page and I can either put the whole report in or I can just do the two pages and I'll distribute to counsel what I'm going to show, and I marked this as Exhibit 134.

JUDGE BUSHMANN: I have no objection to the two pages, unless counsel object to it.

MR. LINTON: I have no objection as long as the witness can identify it within the context, but I do want to see it.

MR. ZOBRIST: Sure. Do you want the

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whole report or --
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MR. LINTON: Yeah. Yeah, let me have those two just for comparison.
Q. (By Mr. Zobrist) Mr. Justis, my only question is going to be on page 1-2.
A. Yes.
Q. It's section 1.3 regarding variability of cost. Do you see that, sir?
A. I do.
Q. Now, in the second sentence of this section regarding variability of cost it states it is imperative to note, however, that transmission lines and substations are all unique and the cost of a specific line or substation may be significantly different than the cost provided here due to a variety of factors. Is that correct?
A. That's what it says, yes.
Q. And this is what Black \& Veatch is telling the Western Electricity Coordinating Council?
A. And I agree with the statement.
Q. And the final statement in this section 1.3 provides, quote, The cost here should be used as a guide to develop approximate costs for new

1 transmission, but should not be used to measure the
Q. Okay. Thank you.

Now let me ask you some questions about the capital cost of wind generation.
A. Certainly.
Q. Do you recall that Mr. Berry used an estimate of $\$ 1,637$ per kilowatt; whereas, you in your estimate used a figure of $\$ 1,877$ per kilowatt?
A. That's correct.
Q. And those two different figures are in Item 4 of your schedule PGJ-1, correct?
A. They are.
Q. Now, the Department of Energy wind technologies market report that was issued in August of 2016 has been admitted into evidence as a schedule to Mr. Langley's surrebuttal. Are you familiar with that report?
A. I am. I've examined it as part of -pardon me. I've examined it as part of my work.

MR. ZOBRIST: Judge, since that's already admitted into evidence, I'm just going to hand out copies of the pages that I'd like to refer to in my examination of the witness.

JUDGE BUSHMANN: Very good.
Q. (By Mr. Zobrist) Now, Mr. Justis, with regard to page 53, and I'm just going to refer to

1 the original page that's part of this excerpt from 2 Exhibit ML 2 to Mr. Langley's surrebuttal. At the 3 paragraph that begins below the figure 40, do you 4 see that where it starts in 2015?

5 A. Yes.
Q. And states there in 2015 the capacity weighted average installed project cost within our sample stood at roughly $\$ 1,690$ per kilowatt down $\$ 640$ per kilowatt or 27 percent from the apparent peak in average reported cost in 2009 and 2010, correct?
A. It does.
Q. And then it goes on to say early indications from a limited sample of 18 projects (totaling 3.4 GW) currently under construction and anticipating completion in 2016 suggests no material change in capacity weighted average installed costs in 2016, correct?
A. Yes.
Q. And do you recall Mr. Langley's surrebuttal where he referred to a wind farm project in western Kansas that Infinity is developing with Westar Energy that's known as the Western Plains Wind Farm Project?
A. I don't believe I -- I may not have

1 heard that testimony, sir.
Q. Okay. It was actually in his written surrebuttal and he quoted a figure of $\$ 1,554$ per kilowatt.
A. Okay. If it's in -- if it's written in his surrebuttal, I'll take that to be correct.
Q. Okay. And you -- so, you don't have any dispute with that?
A. I have no dispute over that's what he stated that number is, no.
Q. Well, he did state that number. I guess what I'm asking is substantively do you have any basis to dispute the fact that the Western Plains Wind Farm Project that Infinity is developing is proceeding at that capital cost level?
A. That's -- I would agree with that.
Q. Okay. And as I understand it, you did not obtain any price quotes from wind turbine vendors for the cost of wind to be installed in western Kansas?
A. I did not.
Q. Now, let me ask you about, if you could turn, please, to page 60 in this excerpt from schedule ML-2, which is that 2015 wind technologies market report. This is the section that relates to

1 O\&M costs.

2
A. Yes.
Q. And for the record, what does O\&M stand for?
A. It typically refers to operating and maintenance costs.
Q. Now, you assumed that maintenance costs for Kansas wind in your work papers had a value of \$44.92 per kilowatt, correct?
A. That sounds right.
Q. And if you would look at page 60 of this excerpt from Exhibit ML-2, Mr. Langley's surrebuttal, it's about halfway down that first full paragraph in the left margin it starts specifically, EDPR. Do you see that, sir?
A. Yes, I believe so.
Q. What does EDPR stand for?
A. I don't know.
Q. Does Energy of Portugal, SA sound correct?
A. I just don't know.
Q. You don't know what EDP stands for?
A. What EDP stands for?
Q. Right. Taken off the $R$, when you hear industry --
A. No.
Q. Okay. You don't even know if they're a wind generating company?
A. I don't specifically know what EDPR is. I mean, they're associated with wind energy business, yes, but what they specifically are in terms of an operator or manufacturer or whatever, I just don't know.
Q. Okay. The report here states specifically EDPR (2016) reported total operating expenses of $\$ 25.50$ per megawatt hour for its U.S. wind project portfolio in 2015, correct?
A. It does.
Q. Okay. And the footnote there says, though, not entirely clear, EDPR's reported operating expenses may exclude any repair or replacement costs that have not been capitalized rather than expensed, correct?
A. Where does it say that?
Q. It's in that footnote below.
A. Oh.
Q. Footnote 59.
A. Yes.
Q. And it goes on to state that that cost of $\$ 25.50$ per megawatt hour is more than twice the
$1 \quad \$ 10$ per megawatt hour all-in cost reported for 93 2 projects in the Berkeley lab data assembled since 3 2000; is that correct?
A. That's correct.
Q. But the figure that you used was $\$ 44.92$; is that true?
A. That is true.
Q. Then the next paragraph states this disparity in operating costs between the EDPR and the Berkeley lab data sample reflects in part differences in the scope of the expenses reported, correct?
A. Yes.
Q. Did you make any effort to consult this wind technologies market report when you were preparing your analysis in this case?
A. I reviewed it, but for purposes of data consistency, which $I$ refer to in schedule PGJ-01, I felt it was more appropriate to take data from a consistent source and that source is one that $I$ also felt was credible, which was the EIA capital cost report that covers multiple technologies.
Q. Now, let me switch topics on you just a little bit. I believe one of the other counsel had asked you about the reduction that you've made of

1 the production tax credit from 80 percent to
260 percent in schedule 1 to your rebuttal, correct?
A. Yes, sir.
Q. And are you generally familiar with the 5 IRS Notice 2016-31 that sets forth the standards by 6 which continuous efforts are evaluated?
yes.
Q. And are there a series of so-called excusable disruptions that could, pardon me, that could be used to delay any decreases in the production tax credit?
A. Yes.
Q. Mr. Healy and I think Ms. Pemberton and perhaps Mr. Brady asked you a number of questions about the capacity penalty. So, I'm not going to -not going to plow through all that ground, but let me ask you this. I believe that Mr. Brady stated that, pardon me, not Mr. Brady, but in your

1 conversations with those counsel that --
A. Pardon me.
Q. That the -- I think the difference that they were asking you about, sir, if you could take a look at Exhibit 420. It's the box at the bottom that says items for correction to original Justis corrections to Berry model results.
A. Yes.
Q. Okay.
A. Yes.
Q. And the column that I'm looking at there is the Kansas wind via GBX. Do you see that, sir?
A. Yes.
Q. Okay. So, if you look at that figure that's in gray, that corrected figure of \$94.54.
A. Uh-huh.
Q. If we adjusted for the capacity adder that you calculated, I think you said it was around \$32 or something like that, I've just lost the exact figure.
A. The question was what percentage was the capacity adder and I self-calculated it was around 30 percent.
Q. Right, yeah. I think 30 , 34 percent, correct?

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A. Somewhere in there, yes.
Q. So, if we take that figure and we subtract it, it would make that $\$ 94.54$ be approximately $\$ 62.20$, correct?
A. Yes.
Q. And that would make it cheaper than the advanced combined cycle and the Missouri wind opportunities, correct?
A. It would, but it would not be on an apples-to-apples basis.
Q. What would the number be for the advanced combined cycle, if you have that available?
A. If what?
Q. If we did what you viewed as an apples-to-apples comparison. In other words, the figure adjusted from 94.54 to 62.20.
A. So, base -- well, I'm not sure, and the reason $I$ say that is -- well, I'd have to think about what the implication is of the change $I$ would need to make to the combined cycle based on what the question was before on the wind project.
Q. Well, that's fine. Your counsel can --
A. I want to answer your question.
Q. Oh, you think you can do it?
A. Well, I want to, but $I$ want to make sure

1 I do it correctly. So, you're saying that if we --
2 if we -- part of the issue is both, both facilities
3 have some level of dependable capacity?
Q. Well, my question doesn't ask for an explanation. I simply said if we're going to adjust the 94.54 down to 62.20 and you said that's not an apples-to-apples comparison. My question is: What does the $\$ 74.46$ figure turn into --
A. I don't know. I would need to calculate it.
Q. All right. Thank you.
A. It would go down, yes, but I don't -- I would have to calculate it.
Q. Let me switch gears. You're familiar with the Kansas tax abatement statute?
A. Loosely. Again, I was not familiar with it before this case. Some of the research I did I, of course, tried to look into this issue of property taxes. If it's what $I$ believe you to be referring to is that for a number of years taxes are not charged.
Q. Right. For ten taxable years, correct?
A. Okay. So, I just wasn't sure if I was referring to the same thing that you were.
Q. Right. And the Kansas statutes, and

1 I'll show it to you and to your counsel here in a
2 moment, it's Kansas Statutes Annotated Section
$3 \quad 79.259$ and 66.128, which relate to property which is
4 exempt from transaction -- taxation including
5 certain electric transmission lines.

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7

8

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JUDGE BUSHMANN: Is this 135?
MR. ZOBRIST: 137.
A. Thank you.
Q. (By Mr. Zobrist) Have you had a chance to look at Exhibit 137?
A. Just sitting here, yes.
Q. Is this the tax -- pardon me. The Kansas tax abatement statute that you referred to in some of your work papers?
A. I believe it is. You know, I can't say that I've specifically, you know, seen this document as I looked at the work papers of Mr. Berry and looked at the, you know, the fact that there was an assumption of no taxes. I then did some, you know, some basic research to confirm that $I$ believe that that is correct, but $I$ don't remember seeing this specific document.
Q. Well, I mean, this is the statute that we lawyers look at when we see what the tax laws have to say. My question is: You did do research
and confirm that there is a taxes -- that there is a Kansas tax abatement statute that relates to electric transmission lines and pertinences?
A. Yes, sir.
Q. Okay. And let me show you Exhibit 138, which is one of your work papers which is labeled at the top GBX Case No. 1 calculated LCOE and there's some numbers there.

MR. ZOBRIST: And Judge, this may be
highly confidential, although I don't think I'm going to have to go into in camera to make my point.

JUDGE BUSHMANN: So, this will be

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138-HC?
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MR. ZOBRIST: Correct.
Q. (By Mr. Zobrist) I know the print is small, Mr. Justis, but does this appear to be a copy of the work paper that $I$ just described?
A. I'm double-checking that, please. Yes.
Q. Thank you. MR. ZOBRIST: Judge, it's your preference. I can either ask the Commission to take official notice of Kansas Statutes Annotated Section 79-259 and 66-128, or I can also offer Exhibit 137 into evidence.

JUDGE BUSHMANN: Let's offer it.
(Grain Belt's Exhibit 137 was offered into the record.)

JUDGE BUSHMANN: Anybody object to
Exhibit 137?
MR. LINTON: I'm going to object based upon the fact that Mr. Justis is not a lawyer and he said he did not know what this was.

JUDGE BUSHMANN: That's not what I
heard. I think I heard sufficient foundation. So, I'll overrule that objection and 137 is received.
(Grain Belt's Exhibit 137 was received into the record.)
Q. (By Mr. Zobrist) Now, Mr. Justis, with regard to Exhibit 138, the spreadsheet that's entitled GBX Case No. 1, that relates to the Grain Belt Express transmission line, correct?
A. Right. So, this was -- this portion of my analysis was to basically independently calculate what I believed the rate needed to be for Grain Belt Express.
Q. And about two-thirds of the way over.
A. In the property taxes column?
Q. Right. That's full of a lot of numbers because you assumed that this property would be

1 taxed, correct?
A. This -- yes, yes. I think the -- I think the application of the formula may not have been working properly it appears.
Q. And so, you did not abate taxes for ten years as is allowed under Kansas law, correct?
A. According to this, it appears not.
Q. And is it also fair to say that you assessed -- pardon me, that you used in your analysis the property tax rate of the state of Kansas; is that true?
A. That is -- that is true.
Q. So, you did not use a blend of the property tax rates from all of the states through which the Grain Belt Express transmission line will run; is that correct?
A. I did not and that is something, of course, noted in Mr. Berry's surrebuttal.
Q. And the other states whose property tax rates would need to be brought to bear in the analysis would be a little bit of Indiana, Illinois and Missouri, correct?
A. That's correct.
Q. I think you told Mr. Healy that you did not analyze past or future congestion costs related

1 to the Crystal Lake wind farm and the PPA that the
2 City of Columbia has with them?
A. That's correct.
Q. Now, you said you didn't look at a map. Do you know where Hancock and Winnebago Counties are?
A. Not by counties. When I looked up where some of these projects were located, I just looked them up by their names and didn't necessarily take note of which counties they were in.
Q. Well, the Crystal Lake Wind Farm contract that Mr . Healy referred to states that the Crystal Lake Wind Farm is located in Winnebago County and Hancock County, Iowa, correct?
A. Okay. Yes.
Q. And Winnebago County is on the Iowa-Minnesota border. So, it's in far northern Iowa?
A. I mean, that's my assumption it was in basically northern, northwestern Iowa.
Q. Switching to a different subject. In second data request -- and I wonder if you happen to have a copy in front of you?
A. I should.
Q. And I have an extra set if you do not.
A. Second set. I have it.
Q. Okay. In response to Data Request No. 20 you agreed that Missouri load-serving entities face projected shortfalls in meeting capacity reserves marginal requirements in the next five years, correct?
A. That's correct.

MR. ZOBRIST: Okay. I may be done, Judge. If $I$ can just have a moment.

Nothing further.
JUDGE BUSHMANN: Did you intend to offer

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    138-HC?
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MR. ZOBRIST: Yes, I did. Pardon me, Judge.
(Grain Belt's Exhibit 138-HC was offered into the record.)

JUDGE BUSHMANN: Any objections to the receipt of that exhibit?

Hearing none. 138-HC is received.
(Grain Belt's Exhibit 138-HC was received into the record.)

MR. ZOBRIST: Mr. Williams is suggesting that Exhibit 135 is hanging out there and he's correct, and I don't need to offer it because I got an answer from my witness, so...

JUDGE BUSHMANN: Okay. Questions by commissioners?

COMMISSIONER RUPP: Yeah. Good

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afternoon, sir.
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THE WITNESS: Good afternoon.
COMMISSIONER RUPP: I believe this was asked by two different witnesses and it was -- and it's in your testimony, but $I$ just wanted a clarification. Is it your testimony that in order to get access to Iowa or Missouri wind that new transmission lines would need to be constructed?

THE WITNESS: No.
COMMISSIONER RUPP: Okay. Could you clarify that.

THE WITNESS: The point $I$ was trying to make is that if you wanted to import -- let's presume for sake of argument that new lines were needed. Now, I don't -- I don't believe they are, but I don't -- I don't know what the, you know, specific upgrades might be, what the MISO studies might say with respect to that. So, but let's assume for example we wanted to import northwest, you know, Iowa wind into Missouri and that, therefore, required hypothetically a new line. The length of that line would be shorter than the

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    typical length, from what I understand, that is
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    economical to build an HVDC line.
    COMMISSIONER RUPP: In your graph on I
    think it was in your rebuttal on page 14 , you had
calculated into those -- into your figures --
THE WITNESS: Just a moment.
COMMISSIONER RUPP: -- new transmission
or upgrades to transmission. Is that -- that is
figured into your calculations?
THE WITNESS: I'm sorry, sir. What
figure?
COMMISSIONER RUPP: Oh, it was in your
graph. I got to get to it here. It was in your --
in your rebuttal, page 14.
THE WITNESS: Yes, sir.
COMMISSIONER RUPP: Is there a graph
there?
THE WITNESS: I see it.
COMMISSIONER RUPP: And the Illinois --
or the Illinois. The Iowa and Missouri wind, those
figures in those columns, is that -- there is
transmission lines factored into that?
THE WITNESS: Yes, yes. For -- as I was
doing my study, I was curious for purposes of
conservative -- for purposes of conservatism, if you

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hypothesize that brand new lines would have to be
built, what would this rate be.
    COMMISSIONER RUPP: Okay. Great.
    THE WITNESS: Yeah. I don't know that
    those lines would be needed. My belief is that they
    would not be needed.
    COMMISSIONER RUPP: That's all I had,
    Judge.
        JUDGE BUSHMANN: Any questions?
        COMMISSIONER COLEMAN: No questions.
        JUDGE BUSHMANN: Any cross based on
bench questions? Missouri Landowners?
        MR. AGATHEN: No, Your Honor.
        JUDGE BUSHMANN: Rockies Express?
        MS. GIBONEY: No questions, Judge.
        JUDGE BUSHMANN: Commission staff?
        MR. WILLIAMS: No.
        JUDGE BUSHMANN: MIEC?
        MR. MILLS: No, thank you.
        JUDGE BUSHMANN: Infinity Wind?
        MS. PEMBERTON: No.
        JUDGE BUSHMANN: Wind on the Wires, any
    recross?
        MR. BRADY: No cross or recross.
        JUDGE BUSHMANN: MJMEUC?
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MR. HEALY: Just a follow-up on
Commissioner Rupp's question.
RECROSS-EXAMINATION
BY MR. HEALY
Q. Mr. Justis, if no new lines are built, though, you would expect there to be definitely an impact on congestion pricing if it's dumped into the existing grid; is that correct?
A. If -- well, it depends on the specific scenario you're referring to. So, if you take the grid as is today and you inject additional energy, yes; but if you assume that the lines that are under development, for example the Mark Twain line and other lines that are in part intended to accommodate wind energy are constructed, I don't think that that would necessarily be the case.

MR. HEALY: No further questions.
JUDGE BUSHMANN: Any cross by Grain
Belt?
MR. ZOBRIST: Just briefly.
RECROSS-EXAMINATION
BY MR. ZOBRIST
Q. Mr. Justis, going back to Exhibit 136, those first set of data requests that we sent you. I want to confirm. I mean, your position is that

1 transmission upgrades -- you're not saying no
2 transmission upgrades would be required with regard
3 to the transmission service that's proposed in this
4 case -- pardon me.
5 A. Oh, I think I understand what you're
6 say.

9 service through the existing RTO structure could 10 occur without any transmission upgrades, correct? said, with regard to your testimony, which said there is adequate transmission service through the existing RTO structure and we said is it your position that transmission service referenced in this statement is available today without any transmission upgrades and you said no, correct?
A. Right. I distinguish upgrades from a brand new line.
Q. Well, brand new line can mean an upgrade in a -- in part of the system, correct?
A. It could. What I -- I mean, not a long, like a 300-mile line. What I'm referring to and
what $I$ interpreted your question in the data request to be is if let's say MISO, you know, a transmission service request went into MISO, am I assuming that no upgrades to accommodate that would be necessary and $I$ was not assuming that, and those are generally the small, the smaller type of upgrades that come with an integration study.
Q. Well, I mean, you're familiar with the MTEP, the MISO transmission expansion plan that's done on an annual basis, correct?
A. Uh-huh.
Q. And that typically has a couple of billion dollars of upgrades every year, right?
A. Oh, it does.
Q. And some of them are relatively minor and some of them are fairly major, correct?
A. Absolutely. MR. ZOBRIST: Thank you.

JUDGE BUSHMANN: Redirect?
MR. LINTON: Yes, Your Honor.
REDIRECT EXAMINATION
BY MR. LINTON
Q. You received, Mr . Justis, you received several questions on your levelized cost of energy analysis.
A. Yes, I did.
Q. Can we take a step back and what is the purpose of an LCOE?
A. The -- an LCOE is really meant to be first and foremost a preliminary screening tool to compare potential resources for inclusion in a more detailed integrated resource plan, and the form of the calculation is so that you can compare different, different forms of generation with different operating characteristics, with different sizes and basically boil all those costs down to a comparable cost.
Q. So, that occurs -- that occurs at a very preliminary stage of an analysis?
A. Typically, I mean, in the -- yes, yes. Typically it's preliminary.
Q. And you received a question about an RFP being issued without the need for capacity?
A. An RFP, yes.
Q. For wind being issued without the need for capacity?
A. Yes. Someone could certainly do that.
Q. Would it have been -- would an LCOE have been done prior to that to determine the relative advantages of what you issue the RFP for?

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A. It may or may not have been. I can imagine both scenarios. Certainly someone might want to issue an RFP, right, just to see what the market has so they can incorporate that in their screening collection as part of their LCOE analysis. So, they may be comparing, for example, the received price from that -- from that RFP response against what they calculated to be the LCOEs of other, for example, construction options.
Q. But if you're comparing the relative value of a combustion turbine versus wind generation, you would do the LCOE?
A. Absolutely, and include all relevant costs. That's the whole purpose of an LCOE, to compare things on an equal footing.
Q. Now, you received several questions on the 19.5 figure and the 80.5 capacity cost --
A. Adder.
Q. -- adder, correct?
A. Yes, sir.
Q. First of all, where did you get those numbers?
A. So, the 19.5 percent credit was from Mr. Berry's work papers, I went ahead and accepted that, and the 80.5 is simply the inverse. It's

1 basically 100 percent minus 19.5 percent.
Q. The 19.5 percent, would that represent the relationship between the nameplate rating on the wind generator and what is attributable as firm for meeting load and reserve requirements?
A. Yes. In this context, yes, it would.
Q. So, it would require 80.5 percent of an adder to get it up to the firm load and reserve requirement commitment?
A. Of that nameplate amount, yes. If you wanted to compare that in terms of total capacity benefit, yes.
Q. Now, what is the ratio between the nameplate capacity for wind and the reserve margin firm load commitment that MISO requires -- or that MISO specifies?
A. I think MISO is roughly 15 percent.
Q. $\quad 15$ percent. So, if you used a 15 percent and a 85 percent cost, capacity cost adder, your capacity -- what would that do to your capacity cost adder?
A. I'm honestly not following the question.
Q. Okay. If you change --
A. You mean if the -- you mean if the -if, if, for example, the capacity credit was 15

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percent instead of 19.5 percent?
    Q. Yes.
    A. That would increase the effective LCOE
calculated for that resource.
    Q. For which resource?
    A. For wind -- well, for whatever resource,
add the 15 percent versus the 19.5 percent.
    Q. And right now we're talking about --
    A. Wind.
    Q. -- wind having a 19.5. That would
increase the LCOE for the wind generator?
    A. It would because you have then, instead
of 80.5 percent, you would have 85 percent
effectively of capacity cost adder in that example.
    Q. At your surrebuttal testimony, page 11,
    figure 1, Mr. Healy had some discussion with you
    about the table there.
    A. I'm having trouble finding it.
    Q. Okay. I can wait.
    A. This is on my surrebuttal testimony?
    Q. Yes. I've been doing that all week.
    A. I apologize. I thought I was done
referring to that document.
    Okay. I have it. I'm sorry. What
        page?
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Q. Page 11.
A. Yes, sir.
Q. Table one.
A. Yes.
Q. Now, you made, according to -- in discussion with Mr. Healy, you changed the 19.55 figure to 21.58?
A. Based on my new understanding of when those prices begin, yes.
Q. And then Mr. Healy tried to guide -- or he guided you through some calculation to add some congestion charges?
A. Yes.
Q. Would you necessarily agree that the congestion charges that he outlined were reliable?
A. No, I would not.
Q. And why is that?
A. The issue in my mind is is what time period you're referring to. So, those congestion charges and those examples, they may, for example, be relevant in terms of recent data on the grid, but there's -- it's very -- it's very difficult to forecast and in my opinion congestion charges should not be included when you're thinking past five, ten years and these, you know, these contract

1 considerations are for 25 years.
Q. And even three years, what is your conclusion regarding the relevance of congestion charges three years out?
A. It's really hard to say. I mean, the reliability of those -- of those estimates, in my view, really depends on the specific marketplace you're trying to analyze. I mean, there are underlying uncertainties which drive that reliability of the estimate and different areas have different levels of uncertainty in the underlying parameters.
Q. So, if -- as you look at that table one, is the 21.58 competitive with $32.03 ?$
A. Is 21.58 competitive with $32.03 ?$ I would say no.
Q. You had some questions about the price of Crystal Lake three. If the price of Crystal Lake three is higher than the price of the Infinity Grain Belt Express supply to MJMEUC, would it make any economic sense for Columbia to sign the Crystal Lake three contract when they know MJMEUC is negotiating with Grain Belt Express?

MR. HEALY: Objection, Judge. That calls for speculation what the City of Columbia

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would or would not know.
    JUDGE BUSHMANN: Sustained.
    Q. (By Mr. Linton) You were asked several
questions on what has been marked as Exhibit 135.
This is ML -- Exhibit ML-2 from Mr. Langley's
testimony.
    A. Which one is that? What is the
document?
    Q. Right here.
    A. I'm sorry. I just don't know these by
    reference of the exhibit number.
    Q. I understand.
        What is your understanding of the source
of that information?
    A. My -- well, there are multiple sources,
    but as I read this document, the preponderance of
    the data that underlies the cost data is from the
    American Wind Energy Association, which is a trade
    organization.
    Q. Turning to page 53.
    A. Yes.
    Q. Mr. Zobrist referred you to that first
    sentence underneath figure 40; is that correct?
    A. Yes.
    Q. Would you flip over --
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A. The page?
Q. -- to next page.
A. Pardon me. It's...
Q. I apologize. It's been a long day.
A. I didn't expect my counsel to ask me that question.

I'm sorry. Page 54, I'm here.
Q. Yeah. Starting with the sentence although. Can you read that sentence?
A. Although the EIAs, is that --
Q. Yes.
A. Although the EIAs capacity weighted average cost for 2013 is higher than that derived from our sample, which is perhaps skewed to the low side by one sizable project in a year where little capacity was built, it is nevertheless in align with the declining cost trend from 2009 to 2015.
Q. What does that parenthetical say about the data discussed in that sentence?
A. It simply says the data is perhaps skewed.
Q. On the low side?
A. Yes.
Q. You were also referred to a document that I believe was in Mr. Langley's testimony,

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surrebuttal testimony. Do you have that?
A. The document referred to in

Mr. Langley's surrebuttal testimony?
Q. Right. I believe the schedule was two.
A. No. Which document is it?
Q. If you don't have it, we'll move on.
A. Okay.
Q. Now, you were also asked some questions about the relative cost estimate for the Grain Belt Express construction?
A. Yes.

MR. LINTON: I have an exhibit to distribute and mark.

JUDGE BUSHMANN: Is this going to be 422, Mr. Linton?

MR. LINTON: I think that's right.
Q. (By Mr. Linton) Before we go there, though, let me ask one question about the last line of questioning. You had some questions about data taken from the Exhibit 135, which you previously referred to.
A. Yes.
Q. In your analysis and the principles of doing an LCOE, what drives you in selecting sources of data?

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A. I would say -- I would say two things. One is the basic credibility of the underlying organization that produces that, but equally important would be consistency. So, in other words, I much prefer as a professional to take data from the same, you know, report or the same source if I'm comparing resources in the context of something like an LCOE analysis. In other words, the whole purpose of the LCOE analysis is to compare resources, not necessarily to pinpoint what is the cost of each one in a specific sense, and the concern $I$ run into as a professional, and this -- that concern is actually amplified in the EIA capital cost study that it is important to have consistent methodologies underlying the cost of information. So, in my view, again, EIA reputable data source and that allowed me to have consistent data between -- or assume consistent costing methodologies underlying the wind, combined cycle and various other resources.
Q. Take a look at what has been distributed and marked as Exhibit 422.
A. Is this the AACEI document?
Q. Yes. Can you just describe what this document is.
A. This is the AACEI, which is the American

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Associate -- American Association of Cost Estimators International. This is their general classification system for cost estimates for the building in general construction industries. They publish these documents for various types of industries. For example, there's a similar document for estimating, you know, IT costs for large computer installation, that type of thing.
Q. Does this apply to the construction of transmission lines?
A. I believe it applies in a universal sense to the type -- whatever type of activity that is relevant, and $I$ can tell you for a fact that we did apply it at Ameren.
Q. Would you take a look at page 1. Flip over to the next page. And in the introduction beginning with the sentence examples, does that confirm your, your opinion?
A. Yes. In particular because it references utility infrastructure.
Q. Turning to page 5 of this document, and looking at table one, can you describe what that table represents?
A. Yes. So, this standard or this body, as I mentioned, produces standards that are, in my

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view, wildly used in judging the accuracy of cost estimates. They don't specifically prescribe exactly how to do a cost estimate. What they do, though, is promote generally general best practices, but I think more relevant to this case is they help, help you understand the various levels of uncertainty around a cost estimate based on how far the project is along. And so -- and as the AACEI has many documents. This particular one is really focused on the cost estimate classification system, which is what is reflected in table one.

And so, I'm sorry. Do you have other particular questions or do you want me to continue my discussion?
Q. As long as you want to discuss, go right ahead.
A. Well, I think you're asking me about what this table is.

MR. ZOBRIST: Judge, I'm going to object. That calls for a narrative. JUDGE BUSHMANN: Sustained.
Q. (By Mr. Linton) All right. Then moving on down. What are the -- what are the issues that, that are considered in determining what class of estimate a certain project is in?

MR. ZOBRIST: Judge, the only reason I'm going to object is because this is redirect and I'm not sure what issues we're really dealing with. I mean, a number of us asked specific questions about cost estimates for electric transmission, O\&M for an electric transmission line, and this is kind...

JUDGE BUSHMANN: How is this within the scope, Mr. Linton?

MR. LINTON: This is -- this is a discussion of the variability in the estimates of electric transmission lines, which has previously been discussed.

JUDGE BUSHMANN: All right. I'll allow it. If you can direct your questions to that specifically.
Q. (By Mr. Linton) What, what are the factors that are considered in determining the phase of a cost estimate for a project such as this?
A. Basically, all of the different elements that relate to how far the project is along. So, is it just conceptual? Is it actually -- has a, you know, formal design been done, has formal engineering been done? In the case, for example, of a transmission line, is there a final route? Has geotechnical work been completed, had actual bids

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been received for the materials and labor and other
contract requirements. And so, as you move down
through the categories, the assumed level of
uncertainty reduces.
    Q. At what stage would you say this project
is at in a cost estimate -- estimation stage?
    A. If I had to -- if I had to pick a single
one, I would say class four. I think there were
some elements of class three completed, but
predominantly it's a class four.
    Q. So, the range of low and high estimate
expectations would be what?
    A. According to a class four, would be
    the -- on the low side, minus 10 to minus 20
    percent. On the high side, plus 20 to plus
    30 percent.
    MR. LINTON: I move for the admission of
    Exhibit 422.
                            (Show Me's Exhibit 422 was offered into
the record.)
    JUDGE BUSHMANN: Any objections?
    Hearing none. 422 is received.
    (Show Me's Exhibit 422 was marked for
    identification.)
    MR. LINTON: No further questions.
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JUDGE BUSHMANN: Mr. Justis, that completes your testimony. You are excused.

THE WITNESS: Thank you.
JUDGE BUSHMANN: Thank you.
I believe that completes all the witness testimony. As far as the transcripts go, we'll try and get those out as soon as possible. They're starting to come in now and they will definitely -all of them should be available no later than March 30th. Initial briefs are due on April 10th, reply briefs are due on April 24th, findings of fact and conclusions of law are due on April 25.

Are there any other matters that the parties need to bring up before we adjourn?

MR. ZOBRIST: Judge, the only other matter that $I$ had was with regard to Mr. Haden on behalf of Missouri Farm Bureau, the notice of withdrawal of the witness Spencer Parkinson. I don't believe there was any effort to offer that summary report. So, I presume that you have taken no action and that will not be admitted into the record?

JUDGE BUSHMANN: The prefiled testimony of Mr. Parkinson?

MR. ZOBRIST: Well, it was this summary

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report, which under the Commission's rules is
permitted for direct testimony, but in our view not
for surrebuttal. I was going to object to it, but
it hasn't been offered by Mr. Haden that I recall,
so I presume it's not in the record.
    JUDGE BUSHMANN: Since he withdrew as a
witness and did not offer it, it is not in the
    record of the hearing.
    MR. ZOBRIST: Thank you, Judge.
    JUDGE BUSHMANN: Any other matters that
    need to be discussed? (No response.)
    In that case, I'm happy to say that
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    we're adjourned. Off the record.
    (The hearing was adjourned at 3:43 p.m.)
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CERTIFICATE OF REPORTER

I, Amanda N. Farrar, a Certified Court Reporter for the State of Missouri, do hereby certify that the witnesses whose testimony appears in the foregoing transcript were duly sworn; the testimony of said witnesses was taken by me to the best of my ability and thereafter reduced to typewriting by me; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this hearing was taken, and further that $I$ am not a relative or employee of any attorney or counsel employed by the parties thereto, nor financially or otherwise interested in the outcome of the action.
$\qquad$
Certified Court Reporter

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