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 1                    STATE OF MISSOURI

 2              PUBLIC SERVICE COMMISSION

 3

 4              TRANSCRIPT OF PROCEEDINGS

 5                      Hearing

 6                 November 14, 2014

 7               Jefferson City, Missouri

                      Volume 15

 8

 9   In the Matter of the Application    )

     of Grain Belt Express Clean Line    )

10   LLC for a Certificate of Convenience)

     and Necessity Authorizing it to     )

11   Construct, Own, Operate, Control,   ) File No.

     Manage and Maintain a High Voltage,) EA-2014-0207

12   Direct Current Transmission Line    )

     and an Associated Converter Station)

13   Providing an Interconnection on the)

     Maywood - Montgomery 345 kV         )

14   Transmission Line.                  )

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               MICHAEL BUSHMANN, Presiding,

18                Regulatory LAW JUDGE.

19                ROBERT S. KENNEY, Chairman

                  STEPHEN M. STOLL,

20                   COMMISSIONERS.

21   REPORTED BY:

22   KELLENE K. FEDDERSEN, CSR, RPR, CCR NO. 838

     MIDWEST LITIGATION SERVICES

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 2   P R O C E E D I N G S

 3   (WHEREUPON, the hearing began at

 4   8:30 a.m.)

 5   JUDGE BUSHMANN: Let's go on the

 6   record. It's 8:30 a.m. on November 14th, 2014.

 7   This is day four of the Grain Belt Express

 8   hearings.

 9   I wanted to make a note that we may

10   have some Commissioners missing today. I wanted to

11   let you know that that's not because it's Friday,

12   but because they have to travel to a national

13   conference, and so some of them have some travel

14   conflicts. Some will be here, but I'm not sure how

15   many we'll have today. I just want to let you know

16   that.

17   Before we pick up where we left off

18   yesterday, are there any other preliminary matters

19   that need to be taken care of?

20   MR. ZOBRIST: Judge, I obtained a

21   full copy of the 2013 Wind Technologies Market

22   Report that I had reserved Exhibit No. 124 for, and

23   this was the exhibit from which Mr. Agathan offered

24   a few pages and I objected, and you let it into

25   evidence with my offering to put the full report

 1   in. So I offer it at this time, Exhibit 124.

 2   JUDGE BUSHMANN: Any objections to

 3   that report coming in?

 4   (No response.)

 5   JUDGE BUSHMANN: Then Exhibit 124

 6   will be received into the record.

 7   (GRAIN BELT EXPRESS EXHIBIT NO. 124

 8   WAS MARKED AND RECEIVED INTO EVIDENCE.)

 9   MR. ZOBRIST: Judge, I was going to

10   say to Mr. Jarrett, we will circulate copies of

11   this. I only have one printed copy today. We'll

12   send a link to anyone, and if anyone wants a hard

13   copy, I'll have that here at the time that we

14   reconvene next week.

15   MR. JARRETT: I had one additional

16   matter. I just wanted to say, yesterday I became

17   confused on some of Mr. Langley's testimony

18   regarding the RFI and the redaction document. I

19   had a chance to go back in my office, and I note

20   that we did request it with a data request. Grain

21   Belt Express timely gave it to us. I was simply

22   confused on what he was talking about, and I

23   apologize to the parties and the Commission for my

24   confusion.

25   JUDGE BUSHMANN: It's no problem.

 1   I'm glad that was cleared up.

 2   If nothing else, let's continue on

 3   where we left yesterday. We were having witness

 4   examination of Robert Cleveland. Mr. Cleveland,

 5   I'll remind you you're still under oath, sir. And

 6   the next cross-examination would be by Missouri

 7   Landowners Alliance.

 8   MR. AGATHAN: Thank you, Judge.

 9   ROBERT CLEVELAND testified as follows:

10   CROSS-EXAMINATION BY MR. AGATHAN:

11   Q.   **Good morning, Mr. Cleveland.**

12   A.   Good morning.

13   Q.   **My name is Paul Agathan, and I**

14   **represent the Missouri Landowners Alliance.**

15   **I'd like to direct your attention**

16   **first to the summaries of the analyses known as**

17   **Mr. Moland's Schedule GM-2, page 2.**

18   A.   Okay.

19   Q.   **Do you have those?**

20   A.   I do.

21   Q.   **The intent there is generally to**

22   **compare demand cost, locational marginal prices and**

23   **production costs both with and without the Grain**

24   **Belt line. Is that generally correct?**

25   A.   That's correct.

 1   Q.   And Mr. Moland's analyses were based

 2   on an hourly wind profile supplied to him by

 3   Mr. Berry of Grain Belt; is that correct?

 4   A.   I believe we derived the wind profile

 5   ourselves with -- with discussion with Mr. Berry

 6   about which of the EWITS profiles to derive the

 7   shape from.

 8   Q.   Well, I direct your attention to

 9   Mr. Moland's testimony, direct testimony on page 4,

10   lines 20 to 22.

11   A.   Okay.

12   Q.   Does he not say, an hourly -- an

13   hourly energy profile for generation in western

14   Kansas was provided by Grain Belt Express witness

15   David Berry?

16   A.   He does.

17   Q.   Do you have any reason to doubt what

18   he says there?

19   A.   I interpret that as that Mr. Berry

20   provided us with the EWITS profiles to derive the

21   shape. I don't have any doubt that Mr. Moland's

22   statement is true.

23   Q.   Thank you. The wind profile is

24   essential input into the analysis summarized on

25   Schedule GM-2, is it not?

 1   A.   It is.

 2   Q.   **Without some proxy or measure of an**

 3   **hourly wind profile, you just can't run the**

 4   **analysis, can you?**

 5   A.   You -- yes, we need an hourly wind

 6   profile we can depend upon.

 7   Q.   **Material given to Mr. Moland by**

 8   **Mr. Berry was essentially a printout of the**

 9   **estimated megawatt output at the Kansas wind farms**

10   **for each hour of the year; is that correct?**

11   A.   I don't believe that was the form

12   given -- of the data given to us.

13   MR. AGATHAN: May I approach the

14   witness, your Honor?

15   JUDGE BUOSHMANN: You may.

16   BY MR. AGATHAN:

17   Q.   **I'm going to hand you a copy of a**

18   **document which has our Data Request No. 1 and the**

19   **response from Mr. Moland, which has an attachment**

20   **to that. And you said in discovery that you were**

21   **adopting all of his answers to our data requests;**

22   **is that correct?**

23   A.   That's correct.

24   Q.   **I wonder if you could first read in**

25   **the question and the response from Mr. Moland.**

1   A.   Data Request No. 1. Please provide a

2   copy of the hourly energy profile supplied to you

3   by Grain Belt witness Mr. Berry as described -- as

4   described at page 4, lines 20 to 24 of your direct

5   testimony.

6   Response: Please see GBX response to

7   MLA-01 Attachment 1. And the information is the

8   Grain Belt wind energy hourly profile.

9   Q.   **In what form was that given to**

10   **Mr. Moland?**

11   A.   This was in a spreadsheet, and there

12   were 8,760 rows, and there was an hourly megawatt

13   amount for the Grain Belt wind energy.

14   Q.   **So that would have been the data**

15   **given by Grain Belt to Mr. Moland?**

16   A.   According to that testimony, yes.

17   Q.   **Thank you. Do you know what years**

18   **were used to collect the wind data which went into**

19   **the hourly wind profile that we just talked about?**

20   A.   The -- the wind profile was derived

21   from a number of different EWITS profiles in

22   western Kansas. I believe the number was ten

23   separate EWITS profiles.

24   Q.   **Stop just a minute. When you say**

25   **EWITS, can you explain what that is?**

1   A.   Yes. That's the Eastern Wind

2   Integration Study performed by NREL, or N-R-E-L.

3   **Q.   And it's often -- goes by the acronym**

4   **EWITS?**

5   A.   Yes. EWITS refers to the study that

6   was performed by -- for NREL.

7   **Q.   Excuse me for interrupting.**

8   A.   The answer is that it was one of

9   three years. There were three years of data: 2004,

10   2005, 2006 era wind speed measurements. And I

11   can't confirm completely which of the years we

12   depended upon to derive the EWITS shapes.

13   **Q.   And could you explain briefly how**

14   **Mr. Moland would have utilized the hourly data**

15   **provided by Mr. Berry as an input into his**

16   **analysis?**

17   A.   Yes. The hourly data as shown in

18   the -- in the spreadsheet that you just showed to

19   me was taken and split between the two Grain Belt

20   delivery points. In addition, losses from the DC

21   lines and the converter stations were removed to

22   represent actual injections at the Palmyra tap and

23   Sullivan injection points.

24   MR. AGATHAN: I'm going to distribute

25   a document which has been marked Exhibit 322.

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 1   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

 2   NO. 322 WAS MARKED FOR IDENTIFICATION BY THE

 3   REPORTER.)

 4   BY MR. AGATHAN:

 5   Q.   Do you have a copy of that document?

 6   A.   I do.

 7   Q.   Are the two pages of Exhibit 322 a

 8   fair representation of the data given to Mr. Moland

 9   by Mr. Berry?

10   A.   If this is a printout of the actual

11   spreadsheet, then yes.

12   Q.   To your knowledge, did Mr. Berry or

13   anyone else at Grain Belt provide you or Mr. Moland

14   with any documents which purported to verify the

15   accuracy of this hourly wind profile?

16   A.   I believe we worked in coordination

17   to determine the ten -- to identify the ten EWITS

18   locations and -- and developed jointly that

19   information. If Mr. Berry delivered to us the

20   actual data, then it was as a result of us working

21   together. So I'm very familiar with and I trust

22   that this information reflects the EWITS shapes.

23   Q.   The question was, did he provide any

24   documents which purport to verify the accuracy of

25   the data?

 1   A.   No.

 2   MR. AGATHAN: I'll offer Exhibit 322,

 3   your Honor.

 4   JUDGE BUSHMANN: Any objections?

 5   MR. ZOBRIST: No objection.

 6   JUDGE BUSHMANN: 322 is received.

 7   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

 8   NO. 322 WAS RECEIVED INTO EVIDENCE.)

 9   BY MR. AGATHAN:

10   Q.   In Mr. Moland's analysis he used a

11   total name plate capacity for wind farms connected

12   to the Grain Belt line of 4000 -- approximately

13   4700 megawatts; is that correct?

14   A.   That sounds correct. I believe so,

15   yes.

16   Q.   Can you explain briefly why he has

17   4700 megawatts of capacity connected to the line

18   when Grain Belt says they will be delivering up to

19   4000 megawatts?

20   A.   The 4700 megawatts is the overall

21   capacity potential for the wind resource, and

22   the -- at the point in Kansas where Grain Belt

23   energy enters the line, the maximum amount is

24   curtailed at that point. Only the amount that

25   would be delivering the maximum amount at the

1   delivery point would be allowed onto the line.

2   Q.   So this is an oversimplification, but

3   in order to deliver 4000 megawatts, you have to

4   start with 4700 on the western connection point?

5   A.   No. It would -- it would be on

6   the -- you would only add the losses on the DC

7   lines, which is on the order of a few percentage.

8   I would estimate 4050 megawatts would be injected

9   in order to deliver 500 and 3500.

10   Q.   Okay. I'm still not sure then what

11   the difference is for the other 700.

12   A.   Well, let me give an example. If

13   there was a point in time where there was actually

14   4700 megawatts being produced at the wind farms,

15   only 4050 megawatts of that power would be injected

16   into the line. The remaining 650 megawatts would

17   be curtailed and not allowed to be transferred onto

18   the Grain Belt line.

19   Q.   And so is the additional

20   700 megawatts basically there in order to maximize

21   the amount that eventually gets to the western or

22   the eastern converter stations?

23   A.   I think Clean Line would need to

24   confirm that information.

25   Q.   You're not sure?

1   A.   I'm not sure.

2   Q.   **Do you know where Mr. Moland got the**

3   **figure of 4700 megawatts for his analysis?**

4   A.   I believe that was arrived upon

5   through discussion with Clean Line.

6   Q.   **Based on the wind profile data given**

7   **to Mr. Moland by Mr. Berry, the Kansas wind farms**

8   **had an average annual capacity factor of**

9   **43.1 percent; is that correct?**

10   A.   That sounds right.

11   Q.   **On a different subject, is it your**

12 **understanding that under Grain Belt's proposal, if**

13 **the line is built, they'll be able to charge market**

14 **prices for capacity on their line?**

15   A.   I'm not aware of that. I don't know.

16   Q.   **You just weren't involved in that**

17 **aspect?**

18   A.   That's correct.

19   Q.   **So your analysis makes no attempt to**

20 **estimate the prices at which the energy could be**

21 **sold; is that correct?**

22   A.   My analysis does not.

23   Q.   **If you assume that all of the Kansas**

24 **wind energy gets sold at the Indiana terminal and**

25 **none of it in Missouri, that would drastically**

1 **affect the result shown on Mr. Moland's**

2 **Schedule GM-2, would it not?**

3   A.   I can't characterize drastically.

4 The results would change.

5   **Q.   Significantly?**

6   A.   Perhaps.

7   **Q.   Well, if none of the wind energy gets**

8 **delivered to Missouri, then that schedule is fairly**

9 **meaningless, is it not?**

10   A.   It's my understanding that the

11 project includes both delivery points and would not

12 go forward if the Missouri delivery point was not

13 there. You'd have to confirm with Clean Line, but

14 we only study the project as designed, which it

15 delivers to both terminals.

16   **Q.   Right. But the results shown on that**

17 **schedule depict results from Missouri, do they not?**

18   A.   They depict results from Missouri

19 resulting from the entire project, so injection at

20 both locations.

21   **Q.   Right. And if no wind was injected**

22 **in Missouri, then basically that schedule is**

23 **meaningless, is it not? Just hypothetically, if no**

24 **wind was injected in Missouri?**

25   A.   Hypothetically, the results would

1 change. That's about all I can say.

2   Q.   Did you or Mr. Moland investigate

3 whether or not the Grain Belt project, counting

4 both the cost of energy and cost of transmission,

5 is the least-cost method of producing the result

6 shown at page 2 and 3 of his Schedule GM-2?

7   A.   We studied only the base case and the

8 case with Grain Belt.

9   Q.   So the answer is no?

10   A.   We did not study --

11   Q.   The answer is no?

12   A.   In surrebuttal I did study another

13 alternative, one other alternative for MISO wind.

14   Q.   The question was, did you or

15 Mr. Moland investigate whether or not the Grain

16 Belt project, counting both the cost of energy and

17 the cost of transmission, is the least-cost method

18 of producing the results shown on his

19 Schedule GM-2?

20   A.   No.

21   Q.   Mr. Moland's results also assume that

22 all of the energy sold from the Grain Belt line

23 will be from wind generation; is that correct?

24   A.   That's correct.

25   Q.   Would the results of his analysis be

 1   different if not all of the wind energy transmitted

 2   over the line came from wind?

 3   A.   Yes.

 4   Q.   Are you generally familiar with

 5   Mr. Berry's analysis in his direct testimony of the

 6   levelized cost of certain energy alternatives?

 7   A.   No. I was not involved in that.

 8   Q.   Do you recall that I asked Mr. Moland

 9   in a data request if he had ever seen any study or

10   analysis anywhere which compared the relative costs

11   of various types of generation such as wind and

12   coal by starting with a levelized cost of energy

13   and then adjusting that levelized cost of energy

14   for each alternative by its capacity value as

15   Mr. Berry did?

16   A.   No. I was not involved in that.

17   MR. AGATHAN: May I approach the

18   witness?

19   BY MR. AGATHAN:

20   Q.   I'm going to hand you a copy of a

21   data request which was sent to Mr. Moland, Data

22   Request No. 33, and I'd ask you to read in the data

23   request and Mr. Moland's response.

24   A.   Okay. Data Request No. 33. Please

25   identify all studies or analyses of which you are

1 aware which compare the relative cost of various

2 types of generation, wind, coal, solar, et cetera,

3 by starting with the levelized cost of energy for

4 each alternative and then adjusting LCOE of each

5 alternative by its capacity value.

6   Response: Mr. Moland is not aware of

7 any such studies or analysis described in this

8 question.

9   Q.   Thank you. And you also adopted on

10 behalf of yourself all of the responses to our data

11 requests which Mr. Moland supplied, correct?

12   A.   Correct.

13   Q.   On a different subject, if the Grain

14 Belt line is approved, Mr. Moland calculated that

15 it would displace about 7.7 million megawatt hours

16 of coal generation per year in his base case

17 scenario. Does that sound correct?

18   A.   I would need to look at the figures.

19 Can you tell me where that value is stated in

20 testimony?

21   MR. AGATHAN: May I approach, your

22 Honor?

23   JUDGE BUSHMANN: You may.

24 BY MR. AGATHAN:

25   Q.   I'm not sure it's stated in his

 1   testimony, but I'm going to hand you a copy of a

 2   data request that was sent to Mr. Moland and ask if

 3   you would read in our Request No. 2.4 and the first

 4   response from Mr. Moland.

 5   A.   Okay. Request 2-4. For the time

 6   period covered by the document referenced in

 7   Item 2-1 above, what is the total number of

 8   megawatt hours of coal generation which are

 9   displaced by the wind generation from the proposed

10   Grain Belt line?

11   Business as usual scenario,

12   7.68 million megawatt hours of coal generation is

13   displaced.

14   Q.   Thank you. Part of Mr. Moland's

15   testimony addresses the emissions reduction which

16   would result from a displacement of this coal

17   generation, right?

18   A.   Correct.

19   Q.   Do you have any information which

20   shows that current levels of emissions are in

21   violation of any federal, state or local

22   restrictions on any of those emissions?

23   A.   No. We did not study that.

24   Q.   So to your knowledge, the emissions

25   would be reduced from a lawful level to something

 1 **further below a lawful level?**

 2   MR. ZOBRIST: Objection. That's a

 3 different question and asks for a legal conclusion.

 4   JUDGE BUSHMANN: Response,

 5 Mr. Agathan?

 6   MR. AGATHAN: I'm simply asking, to

 7 his knowledge, don't the results simply show that

 8 emissions are being reduced from a lawful level to

 9 something below a lawful level?

10   MR. ZOBRIST: Judge, there's a lack

11 of foundation because the witness to the prior

12 question said he did not know. So he's assuming

13 that the witness knows something that he said he

14 did not know. And also calls for a legal

15 conclusion.

16   JUDGE BUSHMANN: When you say lawful,

17 are you talking about a legal standard,

18 Mr. Agathan?

19   MR. AGATHAN: All the standards set

20 by the Environmental Protection Agency and

21 Department of Natural Resources.

22   JUDGE BUSHMANN: I'll sustain the

23 objection.

24 BY MR. AGATHAN:

25   Q.   **It's true, is it not, that utilities**

 1   in Missouri are required by law to purchase a

 2   certain percent of their energy needs from

 3   renewable resources?

 4   A.   Yes.

 5   Q.   And assuming that Missouri utilities

 6   meet those standards, won't we see the same

 7   approximate level of emission reductions whether

 8   the utilities get their renewable energy from

 9   Kansas wind or from Missouri wind farms or from any

10   other renewable energy resource?

11   A.   No.

12   Q.   Why is that?

13   A.   It depends on where the energy is

14   injected into the Missouri system as to which power

15   plants would be displaced and thereby causing

16   emissions reduction.

17   Q.   But there will be emissions

18   reductions if Missouri buys renewable energy from

19   some other source than Grain Belt, correct?

20   A.   That's speculation. I can't confirm

21   that.

22   Q.   Well, if we buy renewable -- if

23   Missouri utilities buy renewable energy from Iowa,

24   for example, that's going to displace coal

25   generation, is it not?

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 1          A.     It depends on the amount, but in that

 2   example of Iowa, I would say some amount would be

 3   displaced.

 4          Q.     And that would reduce emissions then

 5   from coal plants?

 6          A.     In that example, yes.

 7          Q.     Do you recall Mr. Moland saying that

 8   the western Kansas wind farms in question would not

 9   be built if the Grain Belt line is not built?

10          A.     I believe that was part of his

11   statement that he made in testimony.

12          Q.     Are you familiar with wind farms and

13   transmission projects which are being planned for

14   western Kansas?

15          A.     Somewhat, yes.

16          Q.     Isn't it true that, according to

17   Grain Belt's application in this case, developers

18   are looking at adding competing transmission lines

19   in the same general areas as the Grain Belt line?

20          A.     I can't confirm if that's part of the

21   application, but I'm aware there are other

22   transmission lines being planned in the region.

23          Q.     Is it fair to say that the output of

24   wind farms is more unpredictable and has more

25   variability in its output than traditional sources
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1   of generation?

2   A.   Yes.

3   Q.   And its variability and

4   unpredictability can cause certain problems when

5   wind generation is added to an existing generation

6   mix?

7   A.   In certain cases, yes.

8   Q.   These problems are sometimes

9   quantified and referred to as wind integration

10   costs?

11   A.   Correct.

12   Q.   In general, is it fair to say that

13   wind integration costs from one particular project

14   will be reduced somewhat if the study area includes

15   a large number of other sources of wind generation?

16   A.   That's correct.

17   Q.   The larger the balancing area in

18   general, the lower will be the cost of integrating

19   the wind?

20   A.   Yes.

21   Q.   What's the largest geographic area

22   you're aware of which has been the subject of a

23   study or analysis of wind integration costs?

24   A.   Worldwide, I can't answer, but the

25   Eastern Wind Integration Study, or EWITS, was a

1   very large study.

2   Q.   And that covered basically the entire

3   United States from the Rocky Mountains to Atlantic

4   Ocean with the exception of, what, Texas and

5   Florida maybe?

6   A.   I can't confirm.

7   Q.   Essentially everything from the

8   Rockies to the Atlantic Ocean?

9   A.   Essentially.

10   Q.   And that was conducted or published

11   in the year 2011?

12   A.   That sounds correct.

13   Q.   Are you familiar with that study?

14   A.   I'm familiar somewhat with that

15   study.

16   Q.   It was prepared by the National

17   Renewable Energy Laboratory of the U.S. Department

18   of Energy, was it not?

19   A.   It was.

20   Q.   In fact, Mr. Moland was on the team

21   that put together that study?

22   A.   That's correct.

23   Q.   As was Mr. Zavadil?

24   A.   Yes.

25   Q.   Do you recall that Mr. Moland told us

 1   **he was not familiar with any wind integration**

 2   **studies other than the eastern wind study we just**

 3   **referred to?**

 4   A.   I don't recall that statement.

 5   MR. AGATHAN: May I approach?

 6   BY MR. AGATHAN:

 7   Q.   **Mr. Cleveland, I'm going to hand you**

 8   **a copy of Data Request No. 34 to Mr. Moland, and I**

 9   **would ask that you read in the request and then the**

10   **first paragraph of the response.**

11   A.   Okay. Data Request No. 34. Please

12   identify the most recent study or analysis you are

13   familiar with which quantifies wind integration

14   costs for any particular system other than a study

15   or analysis authored or compiled by a Grain Belt or

16   Clean Line employee or agent or by a wind

17   generation trade association such as the American

18   Wind Energy Association.

19   Response: Mr. Moland is familiar

20   with the Eastern Wind Integration and Transmission

21   Study, EWITS, which quantified wind integration

22   costs. He is not familiar with any other wind

23   integration studies.

24   MR. AGATHAN: Thank you. I'm going

25   to distribute a copy of what's been marked as

 1   Exhibit 323.

 2   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

 3   NO. 323 WAS MARKED FOR IDENTIFICATION BY THE

 4   REPORTER.)

 5   BY MR. AGATHAN:

 6   Q.   Do you have a copy of what's been

 7   marked as Exhibit 323 before you?

 8   A.   Yes, I do.

 9   Q.   Does that appear to be copies of the

10   cover page and certain pages of the Eastern Wind

11   Integration and Transmission Study that we've been

12   discussing?

13   A.   Yes, it does.

14   Q.   With the addition of some handwritten

15   notes that I added at some of those pages?

16   A.   Yes.

17   Q.   Looking at page 24 of the study, it

18   says it investigated three scenarios involving the

19   various penetrations of wind generation in the

20   eastern interconnection, right?

21   A.   Yes.

22   Q.   And as indicated there at page 24,

23   Scenario 1 assumed high-capacity wind farms all

24   onshore utilizing high-quality wind resources in

25   the Great Plains with other development in the

 1   eastern U.S. where good wind resources exist; is

 2   that correct?

 3   A.   Correct.

 4   Q.   And then Scenarios 2 and 3 included

 5   some offshore wind farms, right?

 6   A.   Right.

 7   Q.   And we don't have any of those yet in

 8   the United States, do we?

 9   A.   Not online as commercial production

10   wind farms.

11   Q.   And then Scenario 4 assumed that wind

12   generation would make it up to 30 percent of the

13   total energy used in this country, right?

14   A.   Perhaps. That's not listed on this

15   page, but that does sound correct.

16   Q.   And we are, of course, nowhere near

17   that point, right?

18   A.   (Witness nodded.)

19   JUDGE BUSHMANN: I'm sorry. What was

20   your answer to that question?

21   THE WITNESS: Right, we're nowhere

22   near 30 percent or 20 percent.

23   BY MR. AGATHAN:

24   Q.   One of the underlying assumptions of

25   the Eastern Wind Study was that sufficient amounts

1   of wind generation increase the variability and

2   uncertainty and demand that power system operators

3   face from day to day or even minute to minute; is

4   that correct?

5   A.   That's correct.

6   Q.   And one of the two major objectives

7   of this study was to quantify how the amounts of

8   wind generation in each of the study scenarios

9   would affect daily operations of the bulk system,

10   correct?

11   A.   Yes. Correct.

12   Q.   And a second major objective was to

13   estimate the costs of those effects on the rest of

14   the system, correct?

15   A.   Correct.

16   Q.   One of the main costs of wind

17   integration is the -- strike that.

18   One of the main costs of wind

19   integration is the problems it causes with various

20   types of reserves which the system operator must

21   maintain in order to maintain the reliability; is

22   that correct?

23   A.   If the level of wind being integrated

24   is high enough, yes, that's one the major costs.

25   Q.   And another problem with wind

1   generation is that it generally does not produce as

2   much on peak and tends to contribute more off peak

3   than on peak?

4   A.   That's a general characteristic of

5   the wind. I don't necessarily say that's a

6   problem. It can be managed in certain ways.

7   Q.   Certainly by mitigating with added

8   cost?

9   A.   Perhaps.

10   Q.   The whole Eastern Wind Study consists

11 of well over 200 pages, more or less, does it not?

12   A.   It's a very long study.

13   Q.   Turning to page 35 of Exhibit 323,

14 the wind study generally modeled the least-cost

15 means of adding additional transmission lines to

16 meet each of the four wind penetration scenarios;

17 is that generally correct?

18   A.   Yes.

19   Q.   That process is described at pages 35

20 to 39 of the study?

21   A.   Yes.

22   Q.   And the results of the analysis are

23 displayed at page 38 of the study with a

24 transmission overlay?

25   A.   Yes.

1   Q.   And the transmission overlays at

2   page 38 depict where the new transmission lines

3   would be built in order to get enough wind into the

4   eastern states to meet the penetration target

5   levels of each scenario?

6   A.   Yes. It's very conceptual

7   transmission maps, but yes.

8   Q.   Now, if you turn to page 162, the

9   chart near the bottom of the page summarizes the

10 conclusions of the study regarding integration

11 costs which would be imposed by the additional wind

12 generation, does it not?

13   A.   It does.

14   Q.   And the added costs are broken into

15 two parts, the cost of day-ahead forecast and cost

16 of added variable reserves?

17   A.   Yes.

18   Q.   And looking at Scenario 1, the study

19 found that the total cost of integrating the

20 additional wind generation would amount to $8 a

21 megawatt hour stated in 2024 dollars; is that

22 right?

23   A.   For the extremely high penetration

24 levels, yes.

25   Q.   If we want to see what the amounts

 1   **are in current dollars, if we go to the last few**

 2   **words at the bottom of page 217 of the document you**

 3   **have before you and then over to page 218, we're**

 4   **told that the $8 per megawatt hour in 2024 dollars**

 5   **is equivalent to $5.13 per megawatt hour in 2009**

 6   **dollars; is that correct?**

 7   A.   Yes, it looks like that was the

 8   conclusion.

 9   Q.   **And if my math is right, it's shown**

10   **at page 218, using the study's annual escalation**

11   **rate of 3 percent, the wind integration costs**

12   **amounts to $5.95 in 2014 dollars. Does that sound**

13   **about right?**

14   A.   That sounds right.

15   MR. AGATHAN: I'd offer Exhibit 323,

16   your Honor.

17   MR. ZOBRIST: Judge, I don't have any

18   objection. I would seek leave to present the

19   Commission with the entire study, since these are

20   just a handful of pages from the study.

21   JUDGE BUSHMANN: I would have no

22   objection to that.

23   MR. ZOBRIST: Thank you, Judge.

24   JUDGE BUSHMANN: So Exhibit 323 is

25   received into the record.

 1   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

 2   NO. 323 WAS RECEIVED INTO EVIDENCE.)

 3   MR. AGATHAN: Thank you, Judge.

 4   BY MR. AGATHAN:

 5   Q.   **Mr. Berry is estimating the cost of**

 6   **Kansas wind generation to be somewhere between 20**

 7   **to $25 per megawatt hour; is that correct?**

 8   A.   I'm not familiar with his

 9   calculations.

10   Q.   **Subject to check, would you assume**

11   **that's the -- accept that those are the numbers in**

12   **his direct testimony, page 14, line 18?**

13   A.   I was not involved in his testimony,

14   so I can't confirm that.

15   Q.   **Well, hypothetically, then, let's**

16   **assume that those are the numbers that are in**

17   **Mr. Berry's testimony.**

18   A.   Okay.

19   Q.   **Midpoint would be $22.50, right?**

20   A.   Between those did you say $20 and 25?

21   Q.   **Yes.**

22   A.   Yes, then 22.50 would be the

23   midpoint.

24   Q.   **And based on Scenario 1 from the wind**

25   **study, the wind integration costs in today's**

1   dollars would increase the cost of the Kansas wind

2   energy by about 26 percent, would it not?

3   A.   That's not a conclusion that I would

4   make. The study integration costs are for very

5   high penetration of wind throughout the eastern

6   United States, and if we are just talking about

7   Kansas wind integrating into Missouri and Indiana,

8   it's a much, much smaller amount, and I would not

9   make that conclusion.

10   Q.   Have you seen any kind of analysis of

11   the cost of integrating Kansas wind into Missouri?

12   A.   That --

13   Q.   Of quantifying it?

14   A.   No. That would not be necessary

15   typically for a wind project the size we're talking

16   about.

17   Q.   On a different subject, are you

18   familiar with the article that Mr. Moland wrote for

19   Public Utility Fortnightly in 2008 about the

20   problems caused by the addition of wind generation

21   in western Texas?

22   A.   I'm not familiar with that article.

23   Q.   Are you familiar with the fact that

24   there was a near meltdown of the grid system in

25   western Texas in February of 2008 due to a sudden

1   **drop in wind generation?**

2   A.   I'm aware that there were, yes, big

3   problems in Texas prior to the buildout of new

4   transmission.

5   MR. AGATHAN: That's all I have, your

6   Honor. Thank you, Mr. Cleveland.

7   JUDGE BUSHMANN: Questions by

8   Commissioners? Mr. Chairman, do you have any

9   questions?

10   CHAIRMAN KENNEY: Just a few.

11   QUESTIONS BY CHAIRMAN KENNEY:

12   Q.   **Good morning, Mr. Cleveland.**

13   A.   Good morning.

14   Q.   **Can you hear me okay?**

15   A.   Yes. Thank you.

16   Q.   **Thank you. I want to ask a few**

17   **questions just to encapsulate in my mind what I**

18   **think we've been discussing yesterday and today.**

19   **As I understand it, your testimony**

20   **and -- sorry. I'm a little bit stuffy here.**

21   **Mr. Moland's testimony which you've adopted, there**

22   **were basically three benefit metrics that you**

23   **measured to determine whether the Grain Belt**

24   **Express project would inure net benefits to the**

25   **state of Missouri; is that fair?**

 1   A.   That's fair.

 2   Q.   **And the three benefit metrics that**

 3 **you examined were demand costs, locational marginal**

 4 **pricing and adjusted production cost?**

 5   A.   Yes, those are the three economic

 6 benefits specific to Missouri.

 7   Q.   **And as I understand it, your analysis**

 8 **indicates that there's net benefit with respect to**

 9 **each of those three metrics?**

10   A.   Each of the three metrics and across

11 all of the four futures that we studied.

12   Q.   **One of the critiques of your modeling**

13 **was that you did not model the impact of the**

14 **high-voltage DC line on the ancillary services**

15 **market, the capacity market and the real-time**

16 **markets in MISO. Do you recall that critique?**

17   A.   Yes, I do.

18   Q.   **So my question is twofold. Is it**

19 **necessary to model the impact the AC -- of the**

20 **high-voltage DC line on those three markets?**

21 **That's my first question.**

22   A.   No. It's not typically done in a

23 production cost study to measure these types of

24 benefits. It's not modeled in another layer of

25 detail beyond the PROMOD simulation. And I'll

 1   state that the PROMOD simulation actually does

 2   model a part of the ancillary market. It models

 3   operating -- operating reserves.

 4   Q.   **Which is one ancillary service?**

 5   A.   Yes. Yes, partially.

 6   Q.   **So why -- why is it -- beyond the**

 7   **fact that PROMOD doesn't do it, why is it not**

 8   **necessary in order to determine the overall**

 9   **economic impact of the line, why isn't it necessary**

10   **to model the ancillary services, capacity and**

11   **real-time markets?**

12   A.   I think when you look at the process

13   we used, which is very similar to SPP and MISO and

14   how they study the economic benefits of

15   transmission lines they're considering, the impact

16   to the LMPs and the wholesale energy market itself

17   is such a large -- when you look at that amount

18   of -- of impact than those amount of dollars

19   compared to the ancillary and real time, the --

20   that's such a larger amount of impact that it's not

21   necessary to model, to look at the ancillary

22   markets and real-time markets, because they're a

23   very small portion of the overall dollars.

24   Q.   **So it's economically insignificant?**

25   A.   Yes. And --

 1   Q.   As compared to the other modeling

 2   that's being done?

 3   A.   Yes. That's a better way of stating

 4   it.

 5   Q.   So you've been so thoroughly

 6   questioned that I don't think I have any additional

 7   ones. Thank you very much.

 8   A.   Okay. Thank you.

 9   JUDGE BUSHMANN: Any cross based on

10   questions from the Bench? Wind on the Wires?

11   MR. REED: No cross.

12   JUDGE BUSHMANN: Commission Staff?

13   MR. ANTAL: No, thank you.

14   JUDGE BUSHMANN: Rockies Express? Is

15   Ms. Durley here?

16   Reicherts and Meyers?

17   MR. DRAG: No questions, your Honor.

18   JUDGE BUSHMANN: Show-Me Concerned

19   Landowners?

20   MR. JARRETT: No questions, Judge.

21   JUDGE BUSHMANN: Missouri Landowners

22   Alliance?

23   MR. AGATHAN: No questions, Judge.

24   JUDGE BUSHMANN: Redirect by Grain

25   Belt?

 1   MR. ZOBRIST: Just a couple of

 2   questions.

 3   REDIRECT EXAMINATION BY MR. ZOBRIST:

 4   Q.   **Mr. Cleveland, to follow up on the**

 5   **Chairman's questions, what was the result of your**

 6   **inquiry into whether demand cost savings were**

 7   **achieved?**

 8   A.   The result was that demand cost

 9   savings were achieved in the business usual

10   scenario on the order of $22 million for one year.

11   And across the other three futures we studied, they

12   were also significant.

13   Q.   **Significant what?**

14   A.   A significant amount. For slow

15   growth, it was $11 million in one year; a robust

16   economy, $69 million in one year; and in the green

17   economy scenario, $32 million in one year.

18   Q.   **And with regard to the lower**

19   **production cost, what was the result of the**

20   **business as unusual scenario?**

21   A.   It resulted in a savings of

22    $574 million across the eastern U.S. in 2019.

23   Q.   **And then what was the result of the**

24   **net congestion cost, reduction or increase? I**

25   **think you said it was a reduction.**

 1   A.   I believe that was reported in my --

 2   at the end of my schedule here. Bear with me.

 3   Actually, that was in my surrebuttal testimony, so

 4   one moment.

 5   So page 11 of my surrebuttal

 6   testimony, on page -- page 11, lines 2 through 5,

 7   in the business as usual scenario results, Ameren

 8   Missouri has a net congestion cost of $200,024 and

 9   65 dollar without the project. And the net

10   congestion cost is negative $149,510 with the

11   project, a reduction of $373,575, specific to

12   congestion. So I believe we reported congestion

13   reduction for Ameren Missouri, not the state.

14   **Q.   Now, you were asked some questions, I**

15   **believe, by either Mr. Jarrett or Mr. Agathan about**

16   **your analysis of this project versus MISO. Do you**

17   **recall that?**

18   A.   Yes, I do.

19   **Q.   What was your conclusion with regard**

20   **to comparing the project, the Grain Belt Express**

21   **project with MISO wind?**

22   A.   My conclusion was that it -- the

23   impact to the state of Missouri of injecting wind

24   through the Grain Belt project had much more

25   benefit than trying to import wind sited in

1 northwestern MISO in terms of all of the metrics,

2 demand cost, adjusted production cost and

3 locational marginal price.

4 **Q. Now, Mr. Agathan asked you a number**

5 **of questions about the Eastern Wind Integration and**

6 **Transmission Study. Do you recall that?**

7 A. Yes.

8 **Q. Did that study have any analysis with**

9 **regard to the Grain Belt Express project in this**

10 **case?**

11 A. No.

12 **Q. Now, Staff asked you some questions**

13 **yesterday about whether you had collaborated with**

14 **them with regard to your study. Do you recall**

15 **that?**

16 A. Yes.

17 **Q. Are the inputs and the assumptions to**

18 **your analysis, are they the same that was provided**

19 **in Mr. Moland's analysis?**

20 A. Yes. I used the exact same inputs.

21 **Q. Was that information with regard to**

22 **fuel price imports, the generator stack, coal**

23 **retirements, local levels and the transmission**

24 **grid, was that information provided to Staff?**

25 A. I believe so, in data requests to

 1   Mr. Moland.

 2   Q.   And was that provided to Staff before

 3   you filed your surrebuttal question -- your

 4   surrebuttal testimony?

 5   A.   Yes.

 6   Q.   Would it be appropriate for a project

 7   like Grain Belt Express Clean Line or a -- an

 8   investor-owned public utility to run the test that

 9   Staff recommends in their rebuttal testimony?

10   A.   The additional analyses for real time

11   that the Commissioner was referring to?

12   Q.   Correct.

13   A.   No, not in a typical study for a

14   transmission line.

15   Q.   And why is that the case?

16   A.   Because as I stated, that the

17   benefits are not significant. It's not -- it's

18   economically insignificant when compared to the

19   impact for day-ahead market prices.

20   MR. ZOBRIST: That's all I have,

21   Judge. Thank you.

22   JUDGE BUSHMANN: Mr. Cleveland, that

23   completes your testimony. You may step down and

24   you're excused.

25   Would you like to call your next

 1 witness?

 2   MR. ZOBRIST: Yes, sir. We would

 3 call David Berry to the stand.

 4   (Witness sworn.)

 5 DAVID A. BERRY testified as follows:

 6 DIRECT EXAMINATION TO MR. ZOBRIST:

 7   **Q.   Please state your name.**

 8   A.   David A. Berry.

 9   **Q.   And where do you work, Mr. Berry?**

10   A.   At Clean Line Energy Partners.

11   **Q.   And what's your position there?**

12   A.   I'm the executive vice president of

13 strategy and finance.

14   **Q.   Did you prepare direct testimony in**

15 **this case which I've marked as Exhibit 118?**

16   A.   I did.

17   **Q.   Did you prepare additional direct**

18 **testimony which has been marked Exhibit 119?**

19   A.   I did.

20   **Q.   And did you prepare a surrebuttal**

21 **testimony which I've marked as Exhibit 120?**

22   A.   I did.

23   **Q.   Okay. And are there any corrections**

24 **to these pieces of testimony?**

25   A.   I have one minor correction on

 1   page 67 of my surrebuttal testimony. I refer to

 2   the original eight I selected.

 3   **Q.   What line are you on, sir?**

 4   A.   I'm sorry. Line 1.

 5   **Q.   All right.**

 6   A.   It should read the original ten I

 7   selected. I refer to ten sites earlier in the

 8   paragraph, and eight was just a typo.

 9   **Q.   Okay. Any other corrections?**

10   A.   No, sir.

11   **Q.   If I were to ask you these questions,**

12   **would your answers be as set forth in these three**

13   **exhibits?**

14   A.   Yes.

15   **Q.   And were your answers given under**

16   **oath?**

17   A.   Yes.

18   MR. ZOBRIST: Judge, I move the

19   admission of Exhibits 118, 119 and 120.

20   JUDGE BUSHMANN: Objections?

21   MR. AGATHAN: I do, your Honor.

22   Again, these are objections that you've already

23   ruled on, but just to preserve the issue for the

24   record. We object to all of Mr. Berry's direct and

25   rebuttal testimony which was the subject of the

 1   October 29 motion of Missouri Landowners Alliance

 2   to strike testimony related to Grain Belt's request

 3   for information. We renew that objection for the

 4   reasons set forth in that motion, and that goes to

 5   the evidence cited in paragraph 5 of that motion.

 6   That's my first objection.

 7   The second is, we object to all

 8   testimony and schedules of Mr. Berry which were the

 9   subject of the November 4th motion of Missouri

10   Landowners Alliance to strike portions of Grain

11   Belt's evidence on the basis of Section

12   536.070(11), Revised Statutes of Missouri. We

13   renew objection for the reasons set forth in that

14   motion.

15   JUDGE BUSHMANN: Based on previous

16   rulings and orders, those objections will be

17   overruled. Exhibits 118, 119, and 120 are received

18   into the record.

19   (GRAIN BELT EXPRESS EXHIBIT NOS. 118,

20   119, 120 WERE MARKED AND RECEIVED INTO EVIDENCE.)

21   JUDGE BUSHMANN: Cross-examination by

22   Wind on the Wires?

23   MR. REED: No cross. Thank you.

24   JUDGE BUSHMANN: Commission Staff?

25   MR. ANTAL: Yes. Thank you, Judge.

 1 CROSS-EXAMINATION BY MR. ANTAL:

 2   Q.   Good morning, Mr. Berry.

 3   A.   Good morning.

 4   Q.   I'd like to start off with some

 5 questions regarding the financial backing of the

 6 project.

 7   A.   Okay.

 8   Q.   You've indicated that you do not

 9 believe Staff's condition on requiring ZAM or ZAM

10 Ventures to guarantee its investment in Clean Line,

11 LLC is necessary; is that correct?

12   A.   Yes. That's correct.

13   Q.   Has National Grid subsidiary, Grid

14 America, fully funded its obligations that National

15 Grid was required to guarantee pursuant to its

16 investment agreements?

17   A.   So it's not a simple yes or no

18 question. There are two kinds of obligations

19 covered by National Grid's guarantee. One was

20 their initial $40 million investment with Clean

21 Line, and that's been fully funded.

22   In addition, there are some ongoing

23 obligations under our shareholder agreement which

24 are still the subject of National Grid's guarantee.

25   Q.   Okay. Could you please describe the

 1   **guarantee that -- that is binding on the parties?**

 2   A.   And to clarify, this is the guarantee

 3   of National Grid USA?

 4   **Q.   Yes.**

 5   A.   So the guarantee is issued by

 6   National Grid USA, which is the entity that owns

 7   all of the regulated businesses and I believe

 8   essentially all of the North American businesses of

 9   National Grid. It's a very large entity.

10   The guarantee covers, as I mentioned,

11   two sets of obligations. One relates to the

12   $40 million investment, initial $40 million

13   investment of National -- excuse me -- of Grid

14   America Holdings, which is a subsidiary of National

15   Grid USA. And that $40 million investment has been

16   fully funded.

17   The other set of obligations covered

18   by the guarantee in question here are obligations

19   under the shareholder agreement, under which

20   National Grid may have either the right to buy a

21   project or the company or the obligation in some

22   cases to buy the company.

23   **Q.   Thank you. It is Staff's**

24   **understanding that certain conditions must be met**

25   **before ZAM Ventures can sell its interest in Clean**

 1   **Line.   Could you please explain those conditions?**

 2   A.   And for clarification, can basically

 3   require National Grid to buy their interest, not

 4   just sell to anyone, but sell to National Grid

 5   pursuant to these special rights that you

 6   mentioned.

 7   **Q.   Yes.**

 8   A.   Yes, there are several conditions.

 9   And I'm going to summarize these as a high level to

10   try to avoid having to disclose confidential

11   information, if that's okay.

12   **Q.   That's fine.**

13   A.   If you need more specifics, we can

14   just go in camera. But National Grid has to

15   continue its -- at least its pro rata funding,

16   meaning 50 percent of the company, and then one of

17   three things has to happen. A certain amount of

18   time has to elapse, which is a number of years, or

19   National Grid buys two projects from Clean Line

20   such as Grain Belt Express or the other projects

21   we're developing, or National Grid increases its

22   interest in Clean Line to above a certain

23   threshold.

24   **Q.   Okay. And are these conditions**

25   **itemized in the LLC agreements?**

 1   A.   That's correct.

 2   Q.   Okay. Again, at a high level, could

 3   you generalize the LLC agreements, other

 4   conditions, things that it covers?

 5   A.   It covers the typical ground of a

 6   shareholder agreement. It covers governance.

 7   Clean Line is run by a manager, which is Michael

 8   Skelly, who testified in this proceeding, and also

 9   a board. National Grid, as Mr. Blacewicz

10   testified, has two members on that board.

11   Mr. Skelly's on the board. ZAM Ventures has two

12   members.

13   The LLC agreement describes the

14   options to buy a project or buy the company of

15   National Grid. It describes how we make decisions

16   as a company, how we set a budget.

17   Q.   Okay. Thank you. So is it accurate

18   to state the remaining obligations under National

19   Grid's guarantee only pertain to its potential

20   buyouts of ZAM Ventures' remaining interest?

21   A.   Correct.

22   Q.   And just so the record is perfectly

23   clear, is it accurate to state that National Grid's

24   obligations under the parent guarantee do not

25   pertain to any ongoing funding needs related

 1   **specifically to the Grain Belt project?**

 2   A.   That's correct. As you heard from

 3   Mr. Blacewicz, National Grid is certainly

 4   interested in continuing to fund the project and

 5   has a process to do that, but that is not actually

 6   covered by the guarantee. Only the initial

 7   contribution was.

 8   **Q.   Thank you. Switch gears now. Would**

 9   **you please turn to page 3 of your direct testimony.**

10   **I believe starting on line 16 you state, There is a**

11   **demonstrated need for the service provided by Grain**

12   **Belt Express. The open access transmission service**

13   **offered by the company is necessary to meet**

14   **requirements of the Missouri Renewable Energy**

15   **Standard, or RES. Did I read that correctly?**

16   A.   You read that part of the sentence

17   correctly. There is more to it.

18   **Q.   Okay. And my question is, what**

19   **information did you rely on in making that**

20   **statement?**

21   A.   And I'll confine my answer here to

22   the Missouri RES. I also think the project, as I

23   note here, has an important role to play in

24   regional RPSs in all the MISO and PJM states.

25   But with respect to the Missouri RES,

 1   I looked at the total demand for the Missouri RES

 2   and I compared that to the existing supply, and

 3   that's set forth in my testimony. And I identified

 4   that there is a substantial gap in the RES, meaning

 5   new renewable resources of some sort will be

 6   required.

 7   And then I examined in my levelized

 8   cost of energy analysis different alternatives to

 9   providing renewable energy to Missouri. So those

10   were Kansas wind delivered through our project,

11   local Missouri wind, wind elsewhere in MISO.

12   And I concluded that Kansas wind

13   delivered to the project is the lowest cost and

14   highest value option to satisfying that need. So I

15   mean necessary here not in the sense that there

16   would be no other way to do it, but that this is

17   the best way to do it.

18   Q.   Okay. Thank you for that

19   clarification on necessary. Have you reviewed the

20   rebuttal testimony of Staff witness Dan Beck?

21   A.   I have.

22   Q.   Do you have a copy of that testimony

23   with you today?

24   A.   I do not.

25   MR. ANTAL: Judge, if I may, I have a

 1   copy I'd like to show the witness.

 2   JUDGE BUSHMANN: Go ahead.

 3   BY MR. ANTAL:

 4   Q.   If you would please turn to page 9 of

 5   Mr. Beck's rebuttal. Are you there? Starting on

 6   line 10, it says, Third, it appears Grain Belt

 7   Express is unaware of the facts that three of the

 8   four investor-owned electric companies in Missouri,

 9   the Empire District Electric Company, Kansas City

10   Power & Light Company, KCP&L Greater Missouri

11   Operations Company, have existing capacity and new

12   contracts that are projected to not only supply

13   enough RECs for each to meet the 15 percent RES

14   requirement for 2021, but also for each to have

15   excess RECs to sell.

16   In addition, Ameren Missouri has made

17   public statements that renewable energy will be a

18   significant part of its Integrated Resource Plan to

19   be filed on October 1st, 2014.

20   Did I -- does that sound -- did I

21   read that correctly?

22   A.   Yes, you did read it correctly.

23   Q.   Okay. Would you agree based off

24   Mr. Beck's statements that three out of four of

25   Missouri investor-owned utilities have existing

 1   capacity and/or purchase power agreements that are

 2   projected to meet their 2021 RES requirements?

 3   A.   I can't verify his exact statement

 4   with respect to three of the four utilities. I do

 5   know that it is true that Ameren Missouri has a

 6   greater need than these other companies for

 7   additional renewables to meet their RES target.

 8   Q.   Based off what you said earlier and

 9   Mr. Beck's statements here in his testimony, would

10   you also agree -- or would you agree that Ameren

11   Missouri has the ability to meet its 2021 RES

12   requirements without purchasing renewable energy

13   transported over the Grain Belt Express?

14   A.   I think they would have ways to do

15   it. I think it would be more costly.

16   Q.   Thank you. If you would please turn

17   to page 15 of your surrebuttal testimony. Okay.

18   Starting on line 20, you state, On October 6, 2014,

19   the city council of Columbia, Missouri adopted a

20   resolution expressing the council's support for the

21   Grain Belt Express project as an economically

22   feasible renewable energy option to serve its

23   city's customers and help the city fulfill its

24   renewable energy ordinance of 15 percent renewable

25   energy usage by 2017.

1   **Did I read that correctly?**

2   A.   You did.

3   Q.   **I would like to ask you a series of**

4 **questions on how a municipal utility like Columbia**

5 **would purchase electricity from Grain Belt Express**

6 **or purchase energy transferring over Grain Belt**

7 **Express rather. Would you agree that Columbia**

8 **Water and Light is a MISO member utility?**

9   A.   In most contexts, yes.

10   Q.   **Okay. And for the purposes of these**

11 **questions, let's assume that this municipal utility**

12 **is also a MISO member in most respects. Would you**

13 **agree that a municipal utility like Columbia would**

14 **have to enter purchase power agreements with one or**

15 **more Kansas wind farm to buy electricity?**

16   A.   Yes, unless they actually owned the

17 wind farms themselves.

18   Q.   **Okay. Would you agree that a**

19 **municipal utility like Columbia would have to pay**

20 **Grain Belt Express for capacity over its lines?**

21   A.   Not necessarily.

22   Q.   **Why do you say not necessarily?**

23   A.   It could be structured such that the

24 wind generator in Kansas, entities like Infinity

25 and Trade Wind that have participated in this

 1   proceeding, and there's many others like them,

 2   would actually be the capacity customers of Grain

 3   Belt. And if the generator purchased at capacity,

 4   they could deliver renewable energy under a power

 5   purchase agreement with Columbia in this case with

 6   a settlement point in Missouri, and in that case,

 7   Columbia could simply buy renewable energy

 8   delivered to Missouri rather than buying capacity

 9   on our line. Both options would work, but it's

10   really the preference of the utility customer.

11   Q.   Under that scenario where the wind

12   farm pays for the capacity over the Grain Belt

13   Express, what is the likelihood of at least a

14   portion of that capacity charge being baked into

15   the purchase power agreements?

16   A.   I'd ask you what you mean by baked

17   in. I'm not totally clear. Sorry.

18   Q.   Well, what's the likelihood that part

19   of the capacity charge that the wind generator

20   would be paying to Grain Belt Express, what would

21   be the likelihood of that -- part of that, at least

22   part of it being in the purchase power agreement

23   that ultimately the utility would be paying?

24   A.   Actually, I think it's unlikely that

25   the charge would be directly passed through to the

1 utility PPA customer.

2   Q.   Could you please describe what you

3 mean by directly passed through?

4   A.   Meaning that the charge that the wind

5 generator in this example pays to Grain Belt also

6 appears as the same charge to the utility customer.

7   Q.   Okay. Thank you. Would you agree

8 that a municipal utility like Columbia would have

9 to pay MISO, M-I-S-O, for transmission of the

10 electricity over its network?

11   A.   Certainly Columbia pays to use the

12 MISO network. I don't think there would be

13 additional charges to purchase wind energy

14 delivered to MISO Missouri. If there were, they

15 would be very small.

16   Q.   Would you agree that a municipal

17 utility like Columbia would have to pay MISO any

18 locational marginal price differential if the

19 locational marginal price at Palmyra is lower than

20 the locational marginal price where the municipal

21 utility is located?

22   Q.   If Columbia were to point to the

23 delivery at the Missouri converter station as a

24 network resource, it would greatly decrease or

25 possibly eliminate the congestion LMP charges they

 1   would face, and further those charges -- if they

 2   don't do that, those charges would likely be very

 3   small because you're not talking about a very long

 4   distance between the Columbia load and the point of

 5   delivery.

 6   But if they -- if Columbia does not

 7   designate it as a resource, it's possible they

 8   could be exposed to some very small congestion

 9   charges, yes.

10   Q.   Okay. Would you agree that a

11   municipal utility like Columbia would have to pay

12   SPP for collecting the energy?

13   A.   No.

14   Q.   Would you agree that a municipal

15   utility like Columbia would have to pay PJM through

16   and out charges for managing the Grain Belt Express

17   line?

18   A.   No.

19   Q.   Would you agree that Missouri

20   utilities that are not members of MISO would be

21   required to pay MISO additional charges for

22   transmission over its network if they were to

23   purchase wind energy transmitted over Grain Belt

24   Express?

25   A.   Could I ask you to repeat that

 1   question, please?

 2   Q.   Certainly. Would you agree that

 3   Missouri utilities that are not members of MISO

 4   would be required to pay MISO additional charges

 5   for transmission over its network if they were to

 6   purchase wind energy transmitted over Grain Belt

 7   Express?

 8   A.   It's possible.

 9   Q.   Thank you. Switching gears again,

10   are you familiar with the rebuttal testimony of

11   Staff witness Sarah Kliethermes?

12   A.   I am.

13   Q.   Did you -- did Ms. Kliethermes

14   recommend the Commission to order Grain Belt

15   Express to work with Staff and the other

16   intervenors to perform some additional studies?

17   A.   She did.

18   Q.   In your surrebuttal testimony, you

19   testified that Grain Belt Express presented a study

20   of the project'S effect on generation owned by

21   Missouri load-serving entities, correct?

22   A.   That's correct.

23   Q.   Did Grain Belt consult with Staff or

24   any other intervenors regarding the reasonableness

25   of the assumptions used in that study?

1   A.   Well, as I believe Mr. Cleveland

2 testified, we had provided many of the key

3 assumptions to the parties in this case. We did

4 not specifically confer with Staff or any other

5 party, but we did make them available for review.

6   **Q.   If the assumptions used by Grain Belt**

7 **Express in its modeling, the effects on generation**

8 **owned by Missouri load-serving entities were**

9 **changed, would you expect to find that the model**

10 **results would be different?**

11   A.   I doubt they would be significantly

12 different because the assumptions and inputs we

13 used have a very robust set of assumptions. And

14 Mr. Cleveland spoke to this a moment ago. The

15 majority are from Ventyx, which is the same

16 software provider most RTOs in the country use.

17   It is possible that if we made some

18 small tweak to some assumption you could see some

19 small difference in results, but it's my opinion

20 it's extremely likely that any changes would not

21 change the basic result here.

22   **Q.   The inputs used in the modeling, are**

23 **those MISO-specific inputs?**

24   A.   Many of them.

25   **Q.   But not all of them?**

1   A.   No.

2   Q.   **Are those inputs Missouri-specific**

3   **inputs?**

4   A.   Could I ask what you mean by

5   Missouri-specific here?

6   Q.   **The inputs such as load assumptions,**

7   **generation capacities, dispatch stack, bid amounts,**

8   **wind delivery, usage, are those Missouri-specific**

9   **inputs as opposed to inputs from a broader area of**

10 **the country?**

11   A.   Well, some of the items you

12 mentioned, not to quibble, are actually outputs of

13 the model rather than inputs. But there are many

14 inputs in the model that are for Missouri, the

15 Missouri transmission system, the Missouri

16 generator stack. The model has a very detailed

17 model simulation of Missouri, as well as the other

18 states in the eastern interconnection.

19   Q.   **Okay. Thank you. Moving on to some**

20 **questions regarding ancillary services and**

21 **congestion. It is -- is it the company's position**

22 **that Mr. Zavadil has determined that it is not**

23 **necessary or appropriate for the company to model**

24 **the impacts of the project on the ancillary**

25 **services market?**

 1   A.   Yes.

 2   Q.   Okay. If you would turn to page 2 of

 3   your surrebuttal, starting on line 14, you state,

 4   Mr. Zavadil's studies indicate that the project

 5   will not introduce a meaningful amount of new

 6   system variability and, therefore, will not have a

 7   substantial impact on ancillary services rates.

 8   Did I read that correctly?

 9   A.   You did.

10   Q.   Did you understand Ms. Kliethermes'

11   testimony to indicate that the rates for ancillary

12   services were the only concerns Staff had with the

13   project's interaction with the ancillary services

14   markets?

15   A.   I would say, yes, I understood that

16   her concern was the rate impact of ancillary

17   services.

18   Q.   Okay. Do you have a copy of Mrs. --

19   or Ms. Kliethermes' rebuttal testimony with you?

20   A.   I do not.

21   MR. ANTAL: Okay. Judge, if I may?

22   JUDGE BUSHMANN: You may.

23   BY MR. ANTAL:

24   Q.   If you could please turn to page 23

25   of her testimony. Starting on line 16 the question

 1   is asked, Is Staff concerned that there is not

 2   adequate ramping capacity currently available in

 3   northeast Missouri to accommodate the injection of

 4   500 megawatts of wind energy at the point selected

 5   by Grain Belt Express for the Palmyra converter

 6   station? Question.

 7   Her answer states: Yes. In its

 8   response to Staff Data Request 4, Robert Zavadil

 9   indicated on behalf of Grain Belt Express that

10   additional system flexibility in the form of

11   fast-ramping generation or another technology may

12   be needed to accommodate the wind generation

13   injected by the Grain Belt Express projects.

14   Did I read that correctly?

15   A.   You did.

16   Q.   Do you agree -- well, do you agree

17   that additional system flexibility may be needed to

18   accommodate the wind injection of the Grain Belt

19   Express projects?

20   A.   Actually, I think it's very likely

21   that the existing system flexibility would be

22   sufficient to handle it.

23   MR. ANTAL: Okay. Judge, I would

24   like to at this point distribute Staff's next

25   exhibit.

 1   JUDGE BUSHMANN: What number?

 2   MR. ANTAL: That's a good question.

 3   JUDGE BUSHMANN: Looks to me like 212

 4   is your next number available.

 5   MR. ANTAL: 212 it is. Thank you.

 6   (STAFF EXHIBIT NO. 212 WAS MARKED FOR

 7   IDENTIFICATION BY THE REPORTER.)

 8   BY MR. ANTAL:

 9   Q.   **Mr. Berry, could you please read the**

10   **heading of this document?**

11   A.   It's entitled Response to Staff's

12   First Set of Data Requests, date of response

13   April 28th, 2014.

14   Q.   **And if you turn to the last page,**

15   **what does -- who does the document refer to as**

16   **responding to it?**

17   A.   Mr. Zavadil.

18   Q.   **Okay. Do you have any reason to**

19   **believe, subject to check, that this is the**

20   **response to the Staff's first set of data requests**

21   **and it was responded by Mr. Zavadil?**

22   A.   I do not, but it does appear this is

23   an incomplete copy of the response.

24   Q.   **Why do you say that?**

25   A.   I believe the second page is -- is

 1   missing.

 2   Q.   You are correct. I apologize for

 3   that oversight. Subject to any objections, I'll --

 4   I have a copy here, one copy unfortunately, of the

 5   full data request. This was not planned. This is

 6   an oversight. Subject to any objections, I'll just

 7   present you with this full copy, and if you would

 8   please, starting on the second page of the

 9   document, starting with the three sigma change,

10   read the remaining paragraph.

11   A.   The three sigma change, which is

12   defined earlier, increases by 16 megawatts for just

13   Ameren Missouri and four megawatts for the entire

14   state. This represents potential additional system

15   flexibility in the form of fast-ramping generation

16   or another technology that may be needed to

17   accommodate the wind generation injected by the

18   Grain Belt Express project.

19   Q.   So would you agree that Mr. Robert

20   Zavadil has indicated in his response that some

21   additional system flexibility may be needed to

22   accommodate the wind injection of Grain Belt

23   Express?

24   A.   He does state it's a potential.

25   However, if you read the subsequent paragraph, it

 1   clarifies that actually this small amount of added

 2   flexibility might not be necessary.

 3   Q.   Okay. And do you have a copy of

 4   Mr. Zavadil's surrebuttal testimony with you?

 5   A.   Let me check.

 6   Q.   Sure.

 7   A.   I do not.

 8   Q.   Okay. I may. I have a copy of it

 9   here. Have you reviewed this document before?

10   A.   Yes, I have.

11   Q.   Okay. The document that I've just

12   handed you, starting on page 7 of Mr. Zavadil's

13   surrebuttal, does it appear to be the same analysis

14   or substantially the same analysis provided in the

15   response to Staff Data Request 4?

16   A.   Very similar, yes.

17   Q.   And would you please read the

18   footnotes on the bottom of page 7?

19   A.   A previous version of this analysis

20   was provided in the response of Grain Belt Express

21   to Staff DR 04. The analysis presented above has

22   been updated based on a more complete Missouri load

23   forecast.

24   Q.   Thank you. If I could please have

25   you turn to turn back to your surrebuttal, page 2.

1   A.   Okay.

2   Q.   You state, starting on line 8,

3   Section 2 summarizes additional studies prepared by

4   Grain Belt Express in response. To the request by

5   Commission Staff witness Sarah Kliethermes, in the

6   surrebuttal testimonies of Robert Cleveland and

7   Robert Zavadil, Grain Belt Express provides the

8   studies requested by Ms. Kliethermes. Is that

9   correct?

10   A.   You've read it correctly.

11   Q.   Okay. And we've already established

12 that the information provided in Data Request 4,

13 response to it is the same analysis provided in

14 Mr. Zavadil's surrebuttal on page 7, correct?

15   A.   It's a similar analysis, yes.

16   Q.   Okay. So when you testify on page 2

17 of your surrebuttal that Grain Belt Express

18 prepared additional studies in response to

19 Ms. Kliethermes' recommendation to provide the

20 Commission with additional information and then

21 state in the same paragraph that Mr. Zavadil

22 indicates that the project will not introduce a

23 meaningful amount of new system variability, are

24 you stating that Mr. Zavadil prepared additional

25 information in response to Ms. Kliethermes'

 1   recommendation?

 2   A.   Yes.

 3   Q.   But was -- wasn't the same analysis

 4   already provided to Staff prior to Ms. Kliethermes

 5   filing her rebuttal testimony?

 6   A.   A similar analysis was. However,

 7   there are other parts of Mr. Zavadil's surrebuttal

 8   testimony that are responsive to the issues raised

 9   by Ms. Kliethermes. And in addition, this analysis

10   was updated and we added additional explanation in

11   Mr. Zavadil's surrebuttal testimony.

12   Q.   Were you in the hearing room when

13   Mr. Zavadil was on the stand?

14   A.   Some of the time.

15   Q.   All right. Well, do you recall that

16   when I inquired with Mr. Zavadil regarding this

17   analysis that he described, the analysis provided

18   in his surrebuttal, as updated analysis as opposed

19   to new analysis?

20   A.   I think that's fair with respect to

21   the specific net load study on page 7 of his

22   testimony.

23   Q.   Okay. Thank you. If you would

24   please turn please now to page 10 of your

25   surrebuttal. You state starting on line 6, In a

 1   historical analysis of MISO LMPs near the point of

 2   injection does not show substantial congestion

 3   compared to the Ameren Missouri load hub; is that

 4   correct?

 5   A.   That's correct.

 6   Q.   You go on to say, Further, in Grain

 7   Belt Express production cost modeling, congestion

 8   at Palmyra tap injection point is not substantial.

 9   Is that also correct?

10   A.   Yes.

11   Q.   Okay. If I may, please, I would like

12   to show the witness, Mr. Berry, a copy of Staff

13   Exhibit 211, assuming he doesn't have it in front

14   of him.

15   A.   I do not.

16   Q.   Mr. Berry, the exhibit I've just --

17   Staff exhibit I've just put in front of you was

18   offered during Mr. -- Dr. Galli's testimony a

19   couple of days ago. Are you familiar with that

20   document?

21   A.   With this -- with this data request?

22   Q.   I believe it's a work paper.

23   A.   Okay. Yes, I'm familiar with it.

24   Q.   Okay. Would you please read the

25   first bulleted points on that document.

 1   A.   When Audrain units are dispatched at

 2   maximum capacity, loss of line, parentheses, S,

 3   close parenthesis, heading south from Audrain

 4   causes greater flows northward toward Palmyra,

 5   overloading the transformer at Palmyra. See map

 6   below for reference. So SPS is to limit to output

 7   at Audrain for loss of line, open parenthesis, S,

 8   close parenthesis, headed south of Audrain.

 9   Second bullet. Audrain has total gen

10   capacity of approximately 588 megawatts, 8 times

11   73.5 megawatts. However, in peak summer case is

12   only dispatched at approximately 320 megawatts for

13   off-peak dispatch at zero megawatts. Thus Richard

14   indicated that this SPS is not applicable since

15   they don't ever model Audrain dispatched at max

16   capacity. Open parenthesis, we checked the

17   contingency files while we were talking. We

18   couldn't find the SPS, so it doesn't seem that it's

19   even being modeled. Will double check again to

20   confirm this and agreed to send me the .CON files

21   so that I can confirm as well, close parens.

22   **Q.   Okay. Maybe I wasn't clear. I was**

23   **just referring to the first bulleted point, but I**

24   **believe you read both.**

25   A.   My apologies. I thought you said

 1   first bullets.

 2   Q.   That's quite all right. Based off

 3   that information and your knowledge of this

 4   document, do you agree that when Audrain units are

 5   dispatched at maximum capacity, the transformer at

 6   Palmyra is overloaded?

 7   A.   No.

 8   Q.   Okay. A few additional questions.

 9   Staff's position is that Missouri wind injection

10   may cause additional transmission constraints which

11   would require transmission upgrades within MISO.

12   Where in the company's testimony can

13   the Commission find a discussion of the company's

14   additional study performed in response to Staff's

15   recommendations that would estimate the cost of

16   transmission upgrades that may be economical to

17   resolve the transmission constraints that its

18   energy injections will cause or exacerbate?

19   A.   Well, in fact, the Commission can

20   find a lot of evidence in this record that there is

21   not a substantial amount of congestion caused by

22   the project that would give rise to the need for

23   such a study.

24   So one piece of analysis is in

25   Mr. Cleveland's surrebuttal testimony. He

 1   discussed that he found that congestion costs to

 2   Ameren Missouri actually declined as a result of

 3   the project.

 4   Another piece of analysis is what we

 5   were just discussing at page 10 of my testimony.

 6   First, we don't see that where we're injecting is

 7   historically congested based on MISO LMPs in our

 8   production cost model, and we don't see that our

 9   injection adds a substantial amount of congestion.

10   And finally, with MISO we do a study

11   showing that our injection is deliverable to MISO

12   load, again -- and we've completed that study --

13   again demonstrating there's not a substantial

14   amount of congestion.

15   Q.   Thank you. While Grain Belt Express'

16   application states that it will be selling

17   500 megawatts of capacity to be delivered to

18   Missouri, the Missouri converter station is

19   designed to receive up to 1000 megawatts of

20   electricity.

21   Where in the company's testimony can

22   the Commission find a discussion of the company's

23   additional study performed in response to Staff's

24   recommendations that would estimate the impact of

25   using the entire design capacity of the Missouri

 1   converter station?

 2   A.   Well, part of the premise of the

 3   question isn't exactly right, which is that the

 4   converter is designed today to deliver

 5   1000 megawatts, because it's not. And Dr. Galli

 6   talked about this at length, that there are aspects

 7   of the converter station that are designed to

 8   handle 1000 megawatts, but there are other aspects

 9   only designed to deliver 500 megawatts and/or

10   studies with MISO are only for 500 megawatts, and

11   we've offered to condition to only use the

12   500 megawatts.

13   So I don't have an answer to your

14   question because I don't totally agree with the

15   premise of it.

16   Q.   Okay. Well, in this case, I believe

17   it was also during Mr. Galli's testimony, if my

18   memory is correct, that the question was posed if

19   there was additional demand of more than the

20   500 megawatts in Missouri, that the Grain Belt

21   Express would be interested in perhaps providing

22   more energy. In that case -- well, one, is that

23   statement correct?

24   A.   Yes, we would be very interested.

25   Q.   Okay. So then are you stating that

1   **the current design of the Missouri converter**

2   **station would not be able to handle any more energy**

3   **injection as it has been, I guess, designed as**

4   **described in your application?**

5   A.   Yes. There would have to be -- as I

6   mentioned, some technical components of the

7   converter station could handle 1000 megawatts

8   without further modification. But my understanding

9   is that there are other components at the converter

10 station that actually would have to be upgraded.

11   And in addition, there would need to

12 be additional interconnection and transmission

13 studies with MISO performed. So it's far from as

14 simple as flipping a switch and increasing it to

15 1000 megawatts.

16   Q.   And would Grain Belt Express under

17 **your technical expertise be required to pay for the**

18 **additional cost of upgrading that converter station**

19 **as well as doing those additional studies?**

20   A.   I'm sorry. What additional

21 studies -- are you referring to the MISO studies?

22   Q.   Any studies needed to increase the

23 **injection of wind energy coming over the Grain Belt**

24 **Express.**

25   A.   Yes.

1   Q.   My last question, I believe, Staff

2   has stated that the economic impact of the line may

3   be greater if the Grain Belt Express, in addition

4   to exporting Kansas electricity, would also export

5   Missouri electricity at times when Kansas wind is

6   not blowing.

7   Where in the company's testimony can

8   the Commission find a discussion of the company's

9   additional study performed in response to Staff's

10 recommendations that would estimate the net impact

11 to Missouri utilities of picking up Missouri energy

12 by day for export to PJM or SPP?

13   A.   Well, we have not done such a study

14 because we don't believe it's necessary. It's not

15 part of our business plan to move energy from

16 Missouri to other states. We've not done any

17 studies on that front which would be extensive and

18 take a long time. It's not a part of our business

19 plan.

20   Q.   With the understanding that you

21 haven't done any studies, given your technical

22 expertise, do you think that it would have a larger

23 economic impact on Missouri if energy would be able

24 to be exported over Grain Belt Express for

25 Missouri?

 1   A.   Just ask you to -- point of

 2   clarification. By larger economic impact, it would

 3   be helpful if you could tell me what you mean. Be

 4   a little more specific.

 5   **Q.   Would it be more beneficial to**

 6   **Missouri ratepayers?**

 7   A.   If we were able to export power from

 8   Missouri?

 9   **Q.   Yes.**

10   A.   I don't know.

11   **Q.   Okay. Thank you very much.**

12   A.   Thank you.

13   MR. ANTAL: That's all I have.

14   JUDGE BUSHMANN: Did you intend to

15   offer Exhibit 212?

16   MR. ANTAL: Yes, if I may.

17   JUDGE BUSHMANN: Any objections?

18   MR. ZOBRIST: As long as we get a

19   complete version, no objection.

20   JUDGE BUSHMANN: I would agree that

21   if you could make sure that the court reporter

22   receives the complete version, and I would also

23   direct you to then provide a complete version to

24   counsel and to the Commissioners so that we have a

25   copy as well.

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 1                  MR. ANTAL:  I'll be happy to do at

 2   that on the next break.

 3                  JUDGE BUSHMANN:  With that in mind

 4   then, Exhibit 212 is received into the record.

 5                  (STAFF EXHIBIT NO. 212 WAS RECEIVED

 6   INTO EVIDENCE.)

 7                  JUDGE BUSHMANN:  It seems to be a

 8   good time for a break.  Why don't we stand in

 9   recess until about 10:25.

10                  (A BREAK WAS TAKEN.)

11                  JUDGE BUSHMANN:  Let's go back on the

12   record.  Our video system is working properly now.

13   The next cross-examination is Reicherts and Meyers.

14                  MR. DRAG:  I have a few questions,

15   your Honor.  Your Honor, I'm going to have to

16   approach the witness and kind of trade this back

17   and forth because that's not working.

18                  JUDGE BUSHMANN:  That's fine.

19   CROSS-EXAMINATION BY MR. DRAG:

20        Q.    Good morning, Mr. Berry.

21        A.    Good morning.

22        Q.    My name is Gary Drag, and I represent

23   Matthew and Christina Reichert and Randall and

24   Roseanne Meyer.

25                  I'm going to hand you a document.  It
```

 1   is Grain Belt's responses to our first set of data

 2   requests to Grain Belt Express.   Can you confirm

 3   that is what I'm handing you?

 4   A.   That appears to be the case, but I

 5   have to say I'm actually not familiar with it.

 6   Q.   That's okay.   The questions are --

 7   cover some financial issues.   May I have that back?

 8   A.   (Indicating.)

 9   Q.   Would you please read in our request

10   No. 15 and a response that was provided.

11   A.   Provide GBE's budgeted cost by state

12   and in total for acquiring all of the easement

13   agreements needed by the project.

14   Response: Grain Belt Express expects

15   that acquiring all easement agreements needed by

16   the project will cost approximately $50 million.

17   Of the $50 million total, about $17 million is

18   budgeted for Missouri easement payments.

19   Q.   Do you agree with that statement?

20   A.   I do.

21   Q.   Thank you.   Now I've handed you back

22   a paper.   Can you read the question -- or request

23   and the response on Item No. 16?

24   A.   Provide GBE's budgeted cost by state

25   and in total for mitigating the damage caused by

1   the construction of the project.

2   Response: Damages are specific to

3   each landowner and the particular land use of the

4   impacted property at the time of construction. For

5   this reason, Grain Belt Express cannot provide an

6   estimated budget for future damage payments.

7   However, based on the current route and land use,

8   Grain Belt Express expects the damage payments will

9   be a fraction of the total easement payments.

10   Q.   Do you agree with that statement?

11   A.   I agree with it insofar as it was

12 prepared by my colleagues who are knowledgeable at

13 this topic, but I don't have firsthand knowledge

14 about damage payment estimates.

15   Q.   Okay. I was hoping that as a

16 financial person, you know, you would. And even

17 though you don't have firsthand knowledge, could

18 you comment on the term a fraction of? If not,

19 that's okay.

20   A.   I really don't know. I'm sorry.

21   Q.   That's okay. Thank you. And can you

22 please read our request for Item No. 17 and the

23 response.

24   A.   Provide GBE's budgeted cost by state

25 and in total for mitigating the damage caused by

 1   ongoing maintenance after completion of the

 2   project.

 3   Response: Damage caused by ongoing

 4   maintenance will be minimal. Most of the project's

 5   operations and maintenance will be work on the HVDC

 6   converter stations, visual inspections from the

 7   air, and vegetation management within the right of

 8   way. If damage results from the project's

 9   operation or maintenance, Grain Belt Express will

10   repair the damage or pay the landowner. This is

11   outlined in the Grain Belt Express form easement

12   agreement, paren, Schedule CR-4 to Christina

13   Reichert's rebuttal testimony, close parens.

14   Q.   Thank you. To the extent that you

15   know, do you agree with that statement,

16   specifically that the maintenance mitigation

17   payments will be minimal?

18   A.   I certainly agree with the statement

19   that the damage caused by ongoing maintenance will

20   be minimal. And, therefore, I think it's

21   reasonable to infer that damage payments which

22   cover any damage that does occur would also be

23   limited.

24   Q.   Okay. Thank you. And one last

25   question, or at least couple of questions. Can you

1   **read our request and number -- for No. -- and the**

2   **response for No. 18?**

3   A.   Yes.   This has a table of numbers.

4   Would you like me to read the entire table?

5   **Q.   Yes, please.**

6   A.   Okay.   Provide GBE's budgeted labor

7   cost by state and in total for constructing the

8   project.

9   Response: The table below shows the

10 labor cost by state for civil work, foundation

11 work, electric structure work and electric line

12 work required to construct -- to construction the

13 project.   It should say to construct the project.

14   Kansas, 100-- this is a table.   The

15 left-hand column is states and then a total.   The

16 right-hand column is the dollar value.   So I'll

17 read each row of the table in succession.

18   **Q.   Actually, all we really need is the**

19 **Missouri number.**

20   A.   Okay.   Missouri, 134,819,050.

21   **Q.   Okay.   Thank you.   Does that -- based**

22 **on your knowledge, is that the budgeted number, the**

23 **reasonable number for the labor that will be**

24 **required to construct the line?**

25   A.   Yes.

```
 1              MR. DRAG:  Thank you.  And I have no

 2   further questions.  Thank you very much.

 3              JUDGE BUSHMANN:  Just as a note to

 4   the parties, we've got the monitor up and working

 5   now, so if you need to read the page -- read in the

 6   future, we will have that working for you.

 7              Questions by Show-Me Concerned

 8   Landowners?

 9              MR. JARRETT:  Yes, thank you, Judge.

10   CROSS-EXAMINATION BY MR. JARRETT:

11         Q.    Good morning, Mr. Berry.

12         A.    Good morning, Mr. Jarrett.

13         Q.    I want to refer to your surrebuttal

14   testimony, page 24.

15         A.    Okay.

16         Q.    And specifically line 16.

17         A.    I'm there.

18         Q.    And you state there that Dr. Proctor

19   arbitrarily increased capital costs of the project

20   by 30 percent, correct?

21         A.    Yes.

22         Q.    And you submitted a data response to

23   Dr. Proctor asking for supporting documentation for

24   that, did you not?

25         A.    Grain Belt Express did, yes.
```

1   Q.   And I believe you indicate at the

2   bottom of line 22 on the bottom of that page and

3   over on page 25, you indicate in response to that

4   data request, Dr. Proctor provided you with a white

5   paper written by Southwest Power Pool, or SPP, and

6   an SPP presentation entitled Addressing Cost

7   Estimates and Cost Increases.

8   A.   I'm sorry, Mr. Jarrett. I heard

9   page 22.

10   Q.   I'm sorry. 24.

11   A.   Okay.

12   Q.   And I'll need you to repeat the

13   question. I'm sorry.

14   Q.   I apologize. So there on line 22,

15   bottom of the page, beginning with that sentence in

16   response, over to page 25, first couple of lines,

17   you indicate that in response to that data request,

18   Dr. Proctor provided you with a white paper written

19   by SPP or Southwest Power Pool and an SPP

20   presentation entitled Addressing Cost Estimates and

21   Cost Increases; is that correct?

22   A.   Yes, it is.

23   Q.   And further on there you indicate

24   that you reviewed that PowerPoint presentation,

25   correct?

 1   A.   I did.

 2   MR. JARRETT: At this time I'd like

 3   to distribute Exhibit 404.

 4   (SHOW-ME CONCERNED LANDOWNERS EXHIBIT

 5   NO. 404 WAS MARKED FOR IDENTIFICATION BY THE

 6   REPORTER.)

 7   BY MR. JARRETT:

 8   Q.   **Mr. Berry, is that the presentation**

 9   **that you reviewed?**

10   A.   It appears to be.

11   Q.   **Would you go to slide No. 3. Heading**

12   **is regional state committee motions. First of all,**

13   **back up. The title of this again is Addressing**

14   **Cost Estimates and Cost Increases, correct? That's**

15   **on the title page?**

16   A.   Yes. Project cost task force,

17   February 18th, 2011.

18   Q.   **Southwest Power Pool down there at**

19   **the bottom. Now page 3. Could you read Motion 1,**

20   **please?**

21   A.   RSC recommends that SPP review what

22   is the best manner to address significant cost

23   increases and/or overruns of transmission projects

24   that are regionally funded.

25   Q.   **Would you agree that cost increases**

 1   and/or overruns increase the estimated costs of the

 2   project?

 3   A.   If there isn't sufficient contingency

 4   to account for those increases, yes.

 5   Q.   So those -- so those cost overruns

 6   and additional costs can be referred to as

 7   contingencies?

 8   A.   No.

 9   Q.   Okay. For purposes of this

10   presentation, are they contingencies, would you

11   say?

12   A.   I wouldn't agree with that.

13   Q.   Well, anyway, you build in

14   contingencies to cover cost overruns, correct, in

15   your budgeting?

16   A.   Correct.

17   Q.   Now, let's go to slide 13, and the

18   heading on that slide is Motion 4, Cost Estimate

19   Standards, correct?

20   A.   Yes.

21   Q.   And if you go down to the second -- I

22   guess it's a row where it says estimate name,

23   study, if you go over to the final column on the

24   right, suggested contingency, what does it say

25   under that study row?

Page 1190

1   A.   It says 15 percent to 30 percent.

2   **Q.   So would you agree that in the study**

3   **phase, the suggested contingency is 15 to**

4   **30 percent?**

5   A.   I would agree that SPP suggesting a

6   contingency of 15 to 30 percent for a project that

7   is in the study phase.

8   **Q.   Thank you. Now, at line -- back to**

9   **your surrebuttal on page 25, at lines -- are you**

10 **there?**

11   A.   Yes.

12   **Q.   At lines 17 and 18 you state that**

13 **your estimate is closer to what SPP calls the CMPC**

14 **project estimate or NTC project estimate, both of**

15 **which have a plus or minus 20 percent cost target,**

16 **dash, the same range I used in my direct testimony.**

17   A.   Yes.

18   **Q.   Could you please go back to**

19 **Exhibit 404, slide 12, and the heading on this**

20 **slide is project cost estimating process, paren,**

21 **four stages, end of paren; is that correct?**

22   A.   Yes.

23   **Q.   And then on the left towards the**

24 **bottom it has project timeline --**

25   A.   Yes.

1   Q.   -- correct?

2   And then there is, it looks like

3   stages moving from top to bottom; is that correct?

4   A.   Yes.

5   Q.   Okay. Now, the first stage there is

6   the conceptual study, correct?

7   A.   It's the conceptual phase.

8   Q.   Right. Then underneath that, the

9   next one is the study phase, correct?

10   A.   Yes.

11   Q.   And then it says, NTC issued. What

12   is NTC?

13   A.   Notice to construct.

14   Q.   Okay. And then next it shows a box

15   for the design phase, correct?

16   A.   Yes.

17   Q.   And next it shows a box for the

18   construction phase; is that correct?

19   A.   Yes.

20   Q.   Now, as SPP or any RTO issued an NTC

21   to Grain Belt Express?

22   A.   No.

23   Q.   Let's go back to your surrebuttal

24   testimony at page 17, and specifically line 14.

25   Are you there?

 1   A.   I am.

 2   Q.   Did you state that your estimated

 3   cost to move power on the Grain Belt project is

 4   from 1.5 to 2.0 cents per kilowatt hour?

 5   A.   I'm sorry. Are you referring to my

 6   direct or surrebuttal testimony?

 7   Q.   It may be your direct. I'm sorry.

 8   And that will probably be the only time I refer to

 9   your direct. You're right. It's on your direct,

10   page 17, line 14.

11   A.   Okay. Could you repeat the question,

12   please?

13   Q.   Yeah. Did you state that your

14   estimated cost to move power on the Grain Belt

15   project is one and a half to two cents per kilowatt

16   hour?

17   A.   I did.

18   Q.   Would that equate to $15 per megawatt

19   hour to $20 per megawatt hour?

20   A.   Yes.

21   Q.   Are you saying that $15 per megawatt

22   hour to $20 per megawatt hour equates to a plus or

23   minus 20 percent range for your cost estimate?

24   A.   No.

25   Q.   And why not?

```
 1          A.    Well, in the context of what I said

 2   in my surrebuttal testimony about minus 22 plus

 3   20 percent cost range being consistent with the

 4   approach I took in my direct testimony, I was

 5   actually referring to the contingency included in

 6   our budget and the LCOE model in the testimony, not

 7   this particular statement.

 8          Q.    Okay.  And was the one and a half

 9   cents to two cents cost to move power on the Grain

10   Belt Express based on an estimated 55 percent

11   capacity factor for Kansas wind?

12          A.    It's consistent with it, yes.

13          Q.    And you may have to do a couple of

14   calculations here.  I think this is the only place

15   I ever ask you for any calculations.  So let me --

16   do you agree that if the capacity factor used in

17   this calculation was 50 percent instead of

18   55 percent, the cost per megawatt hour would

19   increase by 10 percent?

20          A.    I don't -- I don't totally agree with

21   that statement.

22          Q.    How much would it increase?

23          A.    I couldn't say exactly.  It would

24   increase by something less than 10 percent.

25          Q.    Well, how would you calculate that?
```

 1   A.   Well, you would look at the lower

 2   losses on the transmission line from filling up the

 3   line less to do a lower capacity factor, and you

 4   would also look at building additional wind

 5   generation when you have a lower capacity factor to

 6   fill up the line further.

 7   Q.   All right. Is the midpoint between

 8   $15 and $20 $17.50?

 9   A.   Yes.

10   Q.   If you use a midpoint between $15 and

11   $20 of 17.50 per megawatt hour, would you agree

12   that 20 percent of 17.50 per megawatt hour is

13   3.50 per megawatt hour?

14   A.   I would.

15   Q.   And adding and subtracting $3.50 per

16   megawatt hour to $17.50 results in a range from $14

17   per megawatt hour to $21 per megawatt hour?

18   A.   Yes.

19   Q.   And would you agree that converting

20   these numbers to a 50 percent capacity factor would

21   increase this range to $15.40 per megawatt hour to

22   $23.10 per megawatt hour?

23   A.   No.

24   Q.   What would the increase be?

25   A.   As you asked before, I can't do the

 1   calculations sitting here because there are other

 2   factors you have to take into account.

 3   **Q.   All right. Different subject. Back**

 4   **to your surrebuttal, page 29, the table at the**

 5   **bottom.**

 6   A.   One moment.

 7   **Q.   Sure.**

 8   A.   Okay.

 9   **Q.   Does the second column in your table**

10   **represent levelized costs in dollars per megawatt**

11   **hour from Dr. Proctor's rebuttal testimony?**

12   A.   Could you repeat the question,

13   please?

14   **Q.   Sure. In the table at the bottom of**

15   **page 29 there, does the second column in the table**

16   **represent levelized costs in megawatt -- dollars**

17   **per megawatt hour from Dr. Proctor's rebuttal**

18   **testimony?**

19   A.   No.

20   **Q.   What does the -- what does the**

21   **heading Proctor total represent?**

22   A.   I'm sorry. I was looking at the

23   second column, the figures. The second column

24   of -- including the text, yes. The first column

25   figures, yes.

 1   Q.   So the answer to that question is

 2   yes?

 3   A.   The -- yes. Under Proctor total,

 4   those are the figures from Proctor's testimony.

 5   Q.   All right. And they represent the

 6   levelized costs in megawatt hours?

 7   A.   Yes.

 8   Q.   Dollars per megawatt hours, I should

 9   say?

10   A.   Yes.

11   Q.   Does this table show your proposed

12   corrections to Dr. Proctor's levelized costs in

13   columns 3, 4, 5, 6 and 8?

14   A.   Yes, it does.

15   Q.   And then column 7 and 9 contain the

16   totals reflecting these corrections?

17   A.   No.

18   Q.   Let's look at No. 7. It says

19   corrected total. What does that represent?

20   A.   Well, it's actually column 6, 7 and 9

21   here that represent the corrected total.

22   Q.   Okay. I'm counting alternatives as a

23   column. So column 7 is corrected total. Does that

24   represent -- does that represent 7 and 9, corrected

25   total, the last one corrected total with corrected

 1   **PTC, do those contain the totals reflecting the**

 2   **corrections from 3, 4, 5, 6 and 8 columns?**

 3   MR. ZOBRIST: Judge -- and

 4   Mr. Jarrett, I apologize. It might be easier since

 5   the columns are not numbered to either number the

 6   columns for clarity in the record or just to

 7   describe them by what they are.

 8   MR. JARRETT: Sure. I'm happy to do

 9   that.

10   BY MR. JARRETT:

11   **Q.   Alternatives, column 1, Proctor total**

12   **No. 2, transmission cost correction No. 3, gas**

13   **generation O&M correction 4, property tax**

14   **correction 5, capacity factor correction 6,**

15   **corrected total 7, corrected total with PTC is 8,**

16   **PTC correction 9, and corrected total is 10. I'm**

17   **sorry. There was 10 columns.**

18   **And so my question is, do columns I**

19   **guess 7 and 10 contain the totals reflecting the**

20   **corrections you made in 3, 4, 5, 6 and 9?**

21   A.   I'm sorry. Was that a question?

22   Q.   **Yes.**

23   A.   Column 7 and 10 represent the

24   corrected totals, yes.

25   Q.   **Thank you. And also with those**

1   **corrections, do columns 7 and 10 also represent**

2   **levelized costs in dollars per megawatt hour?**

3   A.   Yes.

4   Q.   **Do you agree that levelized costs**

5   **includes all of the revenues required to recover**

6   **all of the costs associated with each of the**

7   **alternatives represented in that table?**

8   A.   I partially agree. In the case of

9   Grain Belt and Missouri wind, it actually includes

10 additional costs that are imposed on wind by

11 Dr. Proctor's methodology in terms of having backup

12 or supplemental simple cycle gas generation. So

13 they do include all the costs you mentioned. They

14 include more costs as well.

15   Q.   **Thank you. Could you identify those**

16 **extra costs?**

17   A.   It was what I just mentioned, a cost

18 assessed to wind generation that an amount of

19 simple cycle combustion turbines much greater than

20 the capacity value of the wind turbine would need

21 to be added to the LCOE analysis.

22   Q.   **Does this estimate also include all**

23 **of the income taxes that have to be paid?**

24   A.   In Dr. Proctor's methodology, which

25 I'm using -- this is his method, not my own -- I

 1   believe it's only on the profits, on the equity

 2   that income taxes are actually applied.

 3   Q.   I'm asking you, does your -- does

 4   **this estimate include all income taxes that have to**

 5   **be paid?**

 6   A.   This is a rerun of Dr. Proctor's

 7   model with certain assumptions. So I don't think

 8   it would be fully accurate to characterize this as

 9   my estimate. What I'm doing here is showing that,

10   with some changes to Dr. Proctor's model, it

11   actually supports the economic feasibility of the

12   project. As I think the record is clear, I

13   actually would do this analysis in a different way.

14   Q.   I understand. But I'm just asking,

15   **does it include all income taxes that have to be**

16   **paid?**

17   A.   And I think I've answered that

18   question.

19   Q.   I can't remember what your answer

20   **was. Could you --**

21   A.   I believe in Dr. Proctor's model --

22   Q.   It's a yes or no question.

23   MR. ZOBRIST: Well, Judge, I think he

24   needs to either be asked the question again or he

25   needs clarification.

```
 1                JUDGE BUSHMANN:  It sounds like the

 2   witness can't remember the question.  Can you

 3   repeat it so that he can respond?

 4   BY MR. JARRETT:

 5        Q.    Does this estimate also include all

 6   income taxes that have to be paid?

 7        A.    I think the answer to that is it

 8   depends, because there are different ways in a

 9   financial analysis to incorporate income taxes.  In

10   Dr. Proctor's analysis, they're only incorporated

11   on profits, and this includes income taxes on

12   profits.

13        Q.    So you can't answer yes, no or I

14   don't know?

15                MR. ZOBRIST:  Judge, I think that's

16   argumentative.  He's given a good answer.  He was

17   asked if this included taxes, and he explained what

18   taxes were in there.

19                MR. JARRETT:  I just indicated up

20   front it was a yes or no question.  So I'm trying

21   to figure out if that's a yes, no or I don't know.

22                MR. ZOBRIST:  The problem is that

23   this is Dr. Proctor's model.  It's not Mr. Berry's

24   model.  Mr. Berry's made it very clear what he's

25   done.
```

 1   MR. JARRETT: Well, it's Mr. Berry's

 2   table, and I was asking him a question whether this

 3   includes all the income taxes that have to be paid.

 4   MR. ZOBRIST: That has been asked and

 5   answered.

 6   JUDGE BUSHMANN: Sustain the

 7   objection as to asked and answered.

 8   BY MR. JARRETT:

 9   Q.   Do you agree that the numbers in the

10   first two rows of columns 2, 7 and 10 include,

11   among other costs, estimates of the levelized

12   dollars per megawatt hour that a wind farm would

13   charge a buyer for energy from that wind farm?

14   A.   No, not exactly.

15   Q.   So your answer is no there. Okay.

16   If a wind farm selling energy receives $1 per

17   megawatt hour in production tax credits, by what

18   amount would the estimated levelized cost of wind

19   energy be -- from the wind farm included in columns

20   2, 7 and 10 be reduced?

21   A.   Well, that calculation would require

22   both a consideration of the income tax effects of

23   getting the tax credit, looking at it over ten

24   years, and discounting it back over the full --

25   levelizing over the full life cycle of the asset.

 1   So I don't know.

 2   Q.   Okay.   Thank you.   Next subject.   In

 3   column 4 on page table 29, you show added costs

 4   related to O&M corrections for gas generation,

 5   correct?

 6   A.   Yes.

 7   Q.   And at page 27, line 17 to 21, are

 8   you there?

 9   A.   I am.

10   Q.   You discuss these corrections and add

11   an inflation factor of 2.5 percent to the O&M

12   expenses used by Dr. Proctor in his calculations;

13   is that correct?

14   A.   2.5 percent escalation factor, yes.

15   Q.   Is this addition to the O&M cost to

16   convert real dollars to nominal dollars?

17   A.   I'd say at least in part.

18   Q.   And what is your basis for the

19   assumption that the O&M costs used by Dr. Proctor

20   for gas-fired generations are not already in

21   nominal dollars?

22   A.   Well, he assumes no escalation of any

23   kind, whether real escalation or inflation in his

24   figures. And in my view, that's simply an

25   unreasonable assumption. It assumes that the

 1   people working at a gas plant will receive the same

 2   wages, flat wages over 25 years, and that they

 3   don't require any increase due to inflation. I

 4   think that's an incorrect assumption.

 5   It assumes that, as a natural gas

 6   plant ages, there will be no increase in the

 7   maintenance or spare parts replacement necessary or

 8   major maintenance or any other category of costs.

 9   And I've looked at a number of combined cycle gas

10   financial models in my career and investment

11   opportunities, and that assumption is just way out

12   of line with the industry standard.

13   **Q.   I believe at the beginning of your**

14   **test-- beginning of that answer you stated that**

15   **Dr. Proctor did not apply an inflation factor to**

16   **those estimates; is that correct?**

17   A.   He applied no escalation of any kind.

18   **Q.   Different subject. On the table on**

19   **page 32 of your surrebuttal, you have calculated**

20   **congestion costs from several wind farms in Iowa**

21   **and Minnesota to the Ameren Missouri load, correct?**

22   A.   That's correct.

23   **Q.   And then you used change in marginal**

24   **congestion cost of $9.27 per megawatt hour for the**

25   **average of Iowa wind farms you selected as an**

 1   addition to the cost of MISO wind in the table on

 2   page 34, correct?

 3   A.   That's correct.

 4   Q.   To calculate the hourly congestion

 5   costs between generator -- and I'm talking about

 6   hourly congestion costs now -- between a generator

 7   and a load node in MISO, is it correct that you

 8   subtract the marginal congestion costs at the

 9   generator from the marginal congestion costs at the

10   load and then multiply this difference by the

11   megawatt hour of generation?

12   A.   I'm sorry, Mr. Jarrett. I'll need

13   you to repeat that question.

14   Q.   I'll try to do it a little bit more

15   slowly and pause. So I'm talking about calculating

16   the hourly congestion costs between a generator and

17   a load node in MISO.

18   So is it correct that you subtract

19   the marginal congestion costs at the generator from

20   the marginal congestion costs at the load and then

21   multiply this difference by the megawatt hour of

22   generation?

23   A.   I'm sorry. It's not clear to me in

24   your question what you're subtracting from what.

25   Maybe you can help me.

 1   Q.   Well, do you know what marginal

 2   congestion cost means?

 3   A.   I do.

 4   Q.   What is the marginal congestion cost?

 5   A.   It's one of the three components of

 6   locational marginal price.

 7   Q.   Okay. And does a generator -- are

 8   there marginal congestion costs at the generator?

 9   A.   Yes.

10   Q.   Okay. And are there marginal

11   generation costs at the load?

12   A.   Do you mean marginal congestion

13   costs?

14   Q.   Excuse me. Marginal congestion

15   costs.

16   A.   Yes.

17   Q.   If you subtract the marginal

18   congestion cost at the generator from the marginal

19   congestion cost at the load and then multiply this

20   difference by the megawatt hour of generation,

21   that's how you calculate hourly congestion costs?

22   A.   Yes, that's correct.

23   Q.   Okay. Thank you. And then to

24   calculate the added cost of congestion on a dollar

25   per megawatt hour basis, would you add up the

 1   hourly congestion costs, add up the megawatt of

 2   gen-- megawatt hours of generation and divide the

 3   congestion cost by the megawatt hour?

 4   A.   I'm sorry. I'm having trouble

 5   understanding that question again.

 6   Q.   So to calculate the added cost of

 7   congestion on a dollar per megawatt hour basis, you

 8   would add up the hourly congestion costs, add to

 9   that the megawatt hours of generation, and divide

10   that by the congestion costs per megawatt hour,

11   megawatt hour?

12   A.   I do apologize, but I'm going to need

13   you to ask that one more time.

14   Q.   Looking for the added cost of

15   congestion on a per megawatt -- dollar per megawatt

16   hour basis, would you add up the hourly congestion

17   costs plus the megawatt hour of generation and then

18   divide that sum by the congestion costs per

19   megawatt hour?

20   A.   In this question, what do you mean by

21   hourly congestion costs?

22   Q.   Well, there's hourly -- aren't

23   congestion costs measured hourly?

24   A.   They are, but it could mean a number

25   of things in this context.

 1   Q.   Well, I'm looking for the differences

 2   in marginal congestion costs in each hour by the

 3   megawatt generated at each of the wind farms that

 4   you mentioned in your table.

 5   A.   I'm sorry. I still don't understand

 6   the question.

 7   Q.   Okay. Well, let me move on then. Do

 8   you agree it is important to use the megawatt hour

 9   of generation at the generation node in every hour

10   in order to get the proper megawatt hour weighting

11   of the differences in marginal congestion costs?

12   A.   That's ideal, yes. There are other

13   ways to estimate it.

14   Q.   But that's the ideal?

15   A.   Yes.

16   Q.   Do you make this calculation for each

17   of the wind farms shown on table -- on page 32 or

18   did you instead use an aggregate MISO wind profile

19   in your calculations?

20   A.   I conservatively use the aggregate

21   MISO wind profile which would actually tend to

22   understate the congestion.

23   Q.   And so did you calculate the hourly

24   marginal congestion cost price differences and

25   multiply each hour by the aggregate MISO wind

 1   profile and then divide by the megawatt hours from

 2   the aggregate load profile?

 3   A.   No.

 4   Q.   At each of the wind farm locations,

 5   would you expect the percentage of wind generation

 6   to be the same in every hour of the period that you

 7   examined?

 8   A.   Meaning the same generation level in

 9   megawatts at each wind farm?

10   Q.   Each wind farm that you examined, you

11   would expect the percentage of wind generation to

12   be the same in every hour?

13   A.   I don't understand what percentage of

14   wind generation means in this context.

15   Q.   Output. Would the output vary hour

16   to hour?

17   A.   The output would vary hour to hour

18   for each wind farm.

19   Q.   Different subject. Page 31, lines 10

20   and 11 of your surrebuttal.

21   A.   I'm sorry. Page number again,

22   please?

23   Q.   31.

24   A.   I'm sorry. Okay.

25   Q.   In lines 10 and 11 of that

1 surrebuttal, you say the best wind resources in

2 MISO tend to be in low load areas with relatively

3 weak grids and large amounts of congestion; is that

4 correct?

5   A.   Yes.

6   Q.   And does this statement apply to the

7 conditions on the MISO grid in 2013 and 2014?

8   A.   It does apply in 2013 and 2014, yes.

9   Q.   Do MISO and the transmission owners

10 in MISO have plans to strengthen the transmission

11 grids in these areas?

12   A.   In these areas, could I ask what you

13 are referring to?

14   Q.   In the low load areas with relatively

15 weak grids and large amounts of congestion.

16   A.   Yes, there are some plans to build

17 transmission in those areas.

18   Q.   And is it your understanding of the

19 purpose of what are called economic upgrades in

20 MISO is to reduce congestion in the power grid when

21 the benefits of this reduction exceed the cost of

22 generation upgrades?

23   A.   Yes.

24   Q.   What does FTR stand for?

25   A.   Financial transmission rate.

1   Q.   Does Dr. Proctor's analysis of MISO's

2 FTR option -- Dr. Proctor's analysis of MISO's FTR

3 option was from 2013. So do you agree that those

4 results were for a period that you characterized as

5 having large amounts of congestion for the best

6 wind resources in MISO?

7   A.   I don't actually have Dr. Proctor's

8 testimony in front of me. Assuming his calculation

9 is for 2013, yes, I agree with that statement.

10   Q.   Thank you. And then I believe you

11 had some objections, starting on line 16 on page 31

12 and going to line 3 on page 32, basically to the

13 use of FTRs in general as being relevant to

14 addressing congestion risk, correct?

15   A.   I think my objection here is not the

16 FTR could never be relevant, but the way in which

17 Dr. Proctor was analyzing them was actually

18 irrelevant for the reasons I describe here.

19   Q.   All right. And I believe you mention

20 the fact that FTRs do not cover marginal losses,

21 correct?

22   A.   Yes.

23   Q.   Yet the table on page 34 does not

24 include losses and the table on page 35 adds

25 5 percent average losses, correct?

 1   A.   Correct.

 2   Q.   So do you agree that since MISO

 3   returns the difference between marginal and average

 4   losses to loads, marginal losses are likely to

 5   include only a relatively small risk factor?

 6   A.   No.

 7   Q.   You mention that FTR options are only

 8   for one or two years and that congestion can change

 9   over the lifetime of the asset, correct?

10   A.   That's true.

11   Q.   Would you agree that the possibility

12   of congestion improvement over time in MISO with

13   the FERC Order 1000 requirement that any economic

14   project having a benefit/cost ratio above 1.25 must

15   be built?

16   A.   I'm sorry? I don't understand the

17   question.

18   Q.   Well, would you agree that congestion

19   will be possibly improved over time in MISO with

20   the FERC Order 1000 requirements that any economic

21   project having a benefit/cost ratio above 1.25 must

22   be built?

23   A.   First of all, I don't believe that is

24   a requirements to FERC Order 1000, and I don't have

25   any strong sense that Order 1000 will lead to

1   improved congestion results in MISO.

2   Q.   Does MISO use the 1.25 as the -- as

3   the basis for determining whether an economic

4   project will be built?

5   A.   I don't know.

6   Q.   On page 32 at line 1, you also

7   mention that FTRs cover a block of power 24 hours a

8   day by seven days a week, correct?

9   A.   Yes.

10   Q.   Do you agree that FTRs can be used

11 for on-peak and off-peak hours as well as for the

12 four seasons of the year?

13   A.   Yes. My statement here is typically

14 true of FTRs, but it is true that you can buy them

15 in smaller blocks. They're still blocks.

16   Q.   And do you agree that since FTRs

17 covers a block of hours for on and off-peak hours

18 by season, a fairly detailed analysis of capacity

19 factors expected in each of these periods would be

20 required to determine the amount of FTRs to

21 purchase for a MISO wind farm?

22   A.   Yes.

23   Q.   All right. I'm going to propose a

24 hypothetical. If a 100 megawatt MISO wind farm has

25 an expected capacity factor of 50 percent and

 1   congestion costs equal to the 9.27 -- $9.27 per

 2   megawatt hour that you used in your tables on

 3   pages 34 and 35, would you expect the FTR cost to

 4   cover that congestion cost -- excuse me. Let me

 5   back up and read that again. I didn't put the

 6   emphasis on the right places. So it's -- I didn't

 7   even understand the question the way I asked it.

 8   So I've got a hypothetical. You have

 9   a 100 megawatt MISO wind farm. It has expected

10   capacity factor of 50 percent, and the congestion

11   cost is equal to the $9.27 megawatt hour that you

12   used in your tables on pages 34 and 35. Okay.

13   Have you got that assumption? Would you expect the

14   FTR costs to cover at congestion cost, to be the

15   same?

16   A.   I'm sorry. I don't understand the

17   question.

18   Q.   Okay. Would the FTR cost to cover

19   the congestion cost be the same as the 9.27 per

20   megawatt hour?

21   A.   What do you mean here by the FTR

22   cost?

23   Q.   Well, there's a cost to the FTR,

24   correct?

25   A.   Yes, but it could mean different

 1 things.

 2   Q.   So you can't answer the question?

 3   A.   I'm sorry. I don't understand it.

 4   Q.   Have you ever performed an analysis

 5 of how many megawatts of FTRs to purchase for a

 6 resource that has an annual capacity factor in the

 7 range of 50 percent?

 8   A.   Yes, I have.

 9   Q.   And you state on page 32, lines 2 and

10 3, that congestion costs for wind farms are

11 relevant only when the wind blows and power is

12 actually produced; is that correct?

13   A.   Yes.

14   Q.   Are you implying that there are long

15 periods when the wind farms don't produce power?

16   A.   No.

17   Q.   Are you implying that there are long

18 periods where there are no congestion costs for

19 wind generation because power is not being

20 produced?

21   A.   No. I'm implying that congestion

22 costs from wind farms are proportional to the

23 amount of power produced. So if a little power is

24 being produced, they're not as important. If a lot

25 of power is produced, they're very important.

1   Q.   You looked at congestion costs for

2   six wind farms, correct, I believe from those

3   tables on 34 and 35?

4   A.   I've subsequently actually been able

5   to do a more detailed analysis, but discussed in my

6   surrebuttal testimony, there are six wind farms,

7   yes.

8   Q.   And did you find long periods of low

9   congestion costs for any of these six wind farms?

10   A.   There's actually periods of less

11   congestion when the wind farms weren't producing as

12   much and periods of higher congestion costs when

13   they were producing a lot.

14   Q.   Thank you. Different subject.

15   Page 34, lines 16 and 17. Are you there?

16   A.   I am.

17   Q.   You state that the SPP safe harbor is

18   not relevant for calculating transmission upgrades

19   nor costs from MISO wind, correct?

20   A.   Yes.

21   Q.   So it's correct to say that you do

22   not believe the safe harbor is an estimate for

23   actual upgrade costs?

24   A.   Yes. That's correct.

25   Q.   Do you believe that the SPP safe

 1   harbor is a provision related to how costs are

 2   allocated and has nothing do with what actually --

 3   what it actually costs to interconnect wind farms?

 4   A.   Yes.

 5   Q.   Do you agree that there is a

 6   difference between interconnection costs and costs

 7   associated with obtaining firm transmission service

 8   from a designated resource?

 9   A.   They sometimes overlap, but they can

10   be different.

11   Q.   Do you agree the SPP safe harbor has

12   nothing to do with interconnection costs and is

13   solely related to obtaining firm transmission

14   service from a designated resource?

15   A.   I don't actually know the answer to

16   that question.

17   Q.   Okay. Well, Dr. Proctor states the

18   safe harbor is an estimate of upgrade costs for

19   designated resources located in the same

20   transmission zone. Do you agree he says that?

21   A.   I don't have his testimony in front

22   of me.

23   Q.   Do you remember that from his

24   testimony?

25   A.   I actually don't remember that

 1 statement.

 2   Q.   Well, if it's in there, would you

 3 agree with that statement?

 4   A.   And I need you to repeat the

 5 statement, please.

 6   Q.   That the safe harbor is an estimate

 7 of upgrade costs for designated resources located

 8 within the same transmission zone.

 9   A.   I wouldn't agree with that statement.

10   Q.   Okay. And why wouldn't you agree

11 with that statement?

12   A.   I think it was covered in the prior

13 questions, which is the safe harbor is a question

14 of who pays.

15   Q.   Okay. Do you agree that the safe

16 harbor cost is $180,000 per megawatt hour of the

17 designated resource and Dr. Proctor used $470,000

18 per megawatt as an estimate to upgrade cost for

19 MISO wind?

20   MR. ZOBRIST: Objection. Compound

21 question.

22   MR. JARRETT: I'll straighten it up.

23 BY MR. JARRETT:

24   Q.   Would you agree that the safe harbor

25 cost is $180,000 per megawatt hour designated

 1   resource?

 2   A.   No.

 3   Q.   Do you agree that Dr. Proctor used

 4   $470,000 per megawatt hour as an estimate of

 5   upgrade costs for MISO wind?

 6   A.   Again, I don't have it in front of

 7   me, but that sounds -- actually, I thought you said

 8   470.

 9   Q.   470,000 per megawatt hour.

10   A.   I recall his number being lower, but

11   I don't have it in front of me.

12   Q.   Subject to check, would you --

13   A.   Actually, I recall the figure being

14   lower.

15   Q.   Actually, I found a copy. It's not

16   complete, so I will need your help. I'll just ask

17   it as a hypothetical then. We will just assume it

18   was $470,000 per megawatt as an estimate. Okay?

19   A.   Okay.

20   Q.   Do you agree that the 470 -- excuse

21   me -- yeah, 470,000 per megawatt is approximately

22   74 percent of the cost of entire Grain Belt DC line

23   minus the cost of the converters?

24   A.   Well, that's comparing an absolute --

25   a figure per megawatt to a absolute dollar cost.

 1 So I don't know that I would be able to do that

 2 comparison.

 3   **Q.   So do you have any reason to doubt**

 4 **the 74 percent number?**

 5   A.   I do because the comparison doesn't

 6 actually make sense to me.

 7   **Q.   In the table on page 35 of your**

 8 **surrebuttal, you show both incremental transmission**

 9 **costs for firm transmission service from MISO wind**

10 **as well as incremental congestion costs, correct?**

11   A.   I'm sorry. This is page 35 of my --

12   **Q.   Of your surrebuttal.**

13   A.   -- surrebuttal?

14   **Q.   I'm sorry.**

15   A.   Okay. Could you repeat the question,

16 please?

17   **Q.   Sure. You show both the incremental**

18 **transmission costs for firm transmission service**

19 **from MISO wind as well as incremental congestion**

20 **costs, correct?**

21   A.   That's right.

22   **Q.   Is it your position that having firm**

23 **transmission service from a resource has no impact**

24 **on a utility having financial risk for all of its**

25 **congestion costs?**

 1   A.   It can be helpful.

 2   Q.   **And do you agree that firm**

 3 **transmission service from a designated resource**

 4 **entitled the utility to nominate FTRs from those**

 5 **resources?**

 6   A.   Subject to the availability of those,

 7 yes.

 8   Q.   **All right. Different subject. On**

 9 **pages 35 and 36 of your surrebuttal, I believe you**

10 **discuss the differences in levelized cost models**

11 **used by you and Dr. Proctor, correct?**

12   A.   Yes.

13   Q.   **Is it your conclusion that if both**

14 **models use the same assumptions, they will arrive**

15 **at the same results in terms of which is the most**

16 **competitive resource?**

17   A.   I haven't done the calculations

18 necessary to verify that in all cases.

19   Q.   **Well, does your levelized cost model**

20 **include what the levelized cost to the utility will**

21 **be for a combined cycle generation unit that the**

22 **utility owns?**

23   A.   It's an approximation of that, yes.

24   Q.   **At page 39 of your surrebuttal,**

25 **line 16 to 21, you state that Dr. Proctor's**

 1   approach may be appropriate if the goal of the

 2   analysis is to fill the demonstrated capacity

 3   shortfall, i.e., a reserve margin shortfall,

 4   correct?

 5   A.   Yes.

 6   Q.   Does your model include what the cost

 7   will be for meeting both the capacity and energy

 8   needs of the utility?

 9   A.   It includes capacity value, but my

10   model is geared towards the lowest way to supply

11   energy rather than the lowest cost way to supply a

12   particular capacity.

13   Q.   So it doesn't include -- your model

14   does not include both the capacity and energy needs

15   of the utility?

16   A.   Well, it does include both.

17   Q.   Are you aware of the Commission's

18   rule for meeting the state's requirements for

19   renewable energy that it not result in more than a

20   1 percent increase in retail rates?

21   A.   I am.

22   Q.   In your opinion, does that rule

23   require the utility to look at only energy or to

24   look at both the capacity and energy needs of the

25   utility?

 1   A.   I don't know.

 2   Q.   Different subject. In response to

 3   Show-Me's fourth data request, specifically

 4   Request 13, you provided data showing correlation

 5   between average wind speeds during summer peak

 6   hours compared to average annual wind speeds,

 7   correct?

 8   A.   I'm sorry. This was the fourth set?

 9   Q.   Fourth set.

10   A.   And what's your question?

11   Q.   Specifically Request 13.

12   A.   13B, yes.

13   Q.   13B?

14   A.   Yes.

15   Q.   Thank you. And was this data

16   provided in response to Show-Me's question, do you

17   believe there is a significant correlation between

18   average annual wind speeds and wind speeds during

19   the summer peak load hours?

20   A.   Yes.

21   Q.   Looking at just the Kansas wind

22   portion of the data you sent, does the label for

23   the three-year summer average read that the data

24   for the months of June through September -- that if

25   for the months of June through September -- strike

 1   that.

 2   Looking at just the Kansas wind

 3   portion of the data you sent, does the label for

 4   the three-year summer average read that data for

 5   the months of June through September and for the

 6   peak hours from 2 to 7 p.m.?

 7   A.   I actually will need to see a copy of

 8   the attachment. I have the text here but not the

 9   attachment.

10   Q.   I'll withdraw the question.

11   Different subject. On page 43, line 11 of your

12   surrebuttal testimony, you discuss the reasons that

13   you used the two and a half percent inflation

14   factor, correct, in your calculations of levelized

15   costs?

16   A.   Yes.

17   Q.   Did you add a half a percent to the

18   Federal Reserve's 2 percent inflation rate for

19   personal consumption expenditures to contain an

20   inflation rate for the Consumer Price Index of

21   2.5 percent?

22   A.   That's one factor I considered.

23   Q.   Do you know if the EIA uses the CPI

24   to deflate its nominal forecasts?

25   A.   Which EIA forecast are you referring

1   to, can I ask?

2   Q.   Do you know of any?

3   A.   I know of the EIA forecasts, yes.

4   Q.   Yeah. do you know if any of those

5   forecasts use the CPI to deflate its nominal

6   forecasts?

7   A.   No, I don't know.

8   Q.   Would you agree that you apply the

9   2.5 percent inflation rate consistently to all

10 costs used in your analysis?

11   A.   There was some costs where I made a

12 judgment that a higher escalation rate was

13 appropriate; for example, wind O&M costs. But I

14 used this as a minimum escalation rate for

15 annualized costs.

16   Q.   And you used 2018 as the year for

17 incurring those capital costs, correct?

18   A.   Which capital costs?

19   Q.   Excuse me. I'm sorry. I need to go

20 back. In your levelized cost calculations, what is

21 the year associated with your estimate of Kansas

22 wind capacity costs?

23   A.   I need you to define capacity costs

24 here, please.

25   Q.   Well, how would you define capacity

 1   **costs?**

 2   A.   It could mean different things.

 3   **Q.   As it relates to Kansas wind, how**

 4   **would you define it?**

 5   A.   One possible meaning is the capacity

 6   adder, for example, that Dr. Proctor calculated.

 7   Another could be the capital costs.

 8   **Q.   And did you use either of those in**

 9   **your estimate of the Kansas wind capacity costs?**

10   A.   In my testimony, I actually used

11   both, yes.

12   **Q.   And did you use the year 2018?**

13   A.   Sorry. In what context?

14   **Q.   For incurring those capital costs.**

15   A.   Yes. For Kansas wind, capital costs

16   were incurred in 2018, yes.

17   **Q.   And did you apply your inflation**

18   **factor to the capital costs for Kansas wind and**

19   **Grain Belt's costs?**

20   A.   Yes, I did.

21   **Q.   By applying the inflation factor to**

22   **O&M, fuel and carbon dioxide costs, does the**

23   **inflation factor have a large impact on the**

24   **levelized costs of Kansas wind plus the DC**

25   **transmission on a combined -- or on combined cycle**

1 generation?

2   A.   Has some impact on both.

3   Q.   And final subject. In your

4 surrebuttal testimony at page 47, starting at

5 line 19, and over to line 1 on page 48, you state

6 essentially that if wind is purchased through a

7 purchase power agreement, an independent power

8 producer, then the independent power producer will

9 take on the risk of the lower capacity factor,

10 correct?

11   A.   I'd say lower than expected energy

12 production, which is close to the same thing as

13 capacity factor.

14   Q.   Would you agree that the appropriate

15 risk analysis in this case is whether the capacity

16 factors used in the levelized cost analysis with

17 wind can actually be met with purchase power

18 contracts utilities can potentially enter into at

19 some time in the future?

20   A.   I'll need you to repeat that

21 question.

22   Q.   Would you agree that the appropriate

23 risk analysis in this case is whether the capacity

24 factors used in the levelized cost analysis for

25 wind can actually be met in purchased power

 1   **agreements that utilities potentially enter into at**

 2   **some time in the future?**

 3   A.   That could be one component of risk

 4   analysis.

 5   Q.   **And in the context of availability of**

 6   **contracts with capacity factors at a level that**

 7   **will allow Missouri utilities to meet the state's**

 8   **1 percent cost cap for renewable energy, for the**

 9   **purpose for the -- well, for the purpose of risk**

10   **analysis, I want you to assume that the wind farms**

11   **have expected capacity factors too low to meet that**

12   **requirement.**

13   A.   To meet which requirement?

14   Q.   **To meet the state's 1 percent cost**

15   **cap. And I'll ask the question, then, under that**

16   **assumption, in order to absorb this risk, wouldn't**

17   **the wind farm have to be willing to take a lower**

18   **rate of return on its investment?**

19   MR. ZOBRIST: Judge, I object. I

20   don't understand the question. I'm sorry. There

21   were like three questions in a row. I object as

22   compound.

23   JUDGE BUSHMANN: Can you restate the

24   question?

25   MR. JARRETT: Sure.

 1   BY MR. JARRETT:

 2   Q.   I want you to assume some facts.   So

 3   we're talking about the context of the availability

 4   of contracts with the capacity factors at a level

 5   that allow Missouri utilities to meet the state's

 6   1 percent cost cap of renewable energy.   Okay.   And

 7   then also assume that wind farms have expected

 8   capacity factors too low to meet those

 9   requirements.

10   So under those assumptions, if you

11   were to absorb this risk, wouldn't the wind farm

12   have to be willing to take a lower rate of return

13   on its investment?

14   A.   I'm sorry.   I don't understand what

15   this risk means.

16   Q.   The risk of a lower capacity factor.

17   A.   Well, the question doesn't make sense

18   to me because one of the assumptions was that the

19   capacity factor was lower.   So, therefore, it seems

20   like that's not a risk in the question but rather

21   an assumption.

22   Q.   Well, do you claim that actual gas

23   prices should be added to risk analysis?

24   A.   The volatility of natural gas prices

25   should absolutely be considered in a risk analysis.

 1   Q.   And then -- but you also believe that

 2   the capacity factor for wind should not be

 3   considered as the wind farms take on that risk; is

 4   that correct?

 5   A.   Well, my position is that they're not

 6   analogous at all. I think it's appropriate to

 7   consider both, but they're very different kinds of

 8   risks with different consequences for the public.

 9   Q.   But you indicate that the wind farms

10   will take on that risk, right?

11   A.   The wind farms will take on the risk

12   that the energy production is less than they

13   expect, yes.

14   MR. JARRETT: I don't have any

15   further questions. Thank you.

16   THE WITNESS: Thank you.

17   JUDGE BUSHMANN: Did you wish to

18   offer Exhibit 404?

19   MR. JARRETT: I do, Judge.

20   JUDGE BUSHMANN: Any objections to

21   its receipt?

22   MR. ZOBRIST: No objection.

23   JUDGE BUSHMANN: That exhibit will be

24   received the record.

25   (SHOW-ME CONCERNED LANDOWNERS EXHIBIT

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 1   NO. 404 WAS RECEIVED INTO EVIDENCE.)

 2   JUDGE BUSHMANN: Questions by

 3   Missouri Landowner's Alliance.

 4   MR. AGATHAN: Thank you, Judge.

 5   CROSS-EXAMINATION BY MR. AGATHAN:

 6   Q.   Mr. Berry, my name is Paul Agathan.

 7   I represent the Missouri Landowners Alliance.

 8   A.   Good morning, Mr. Agathan.

 9   Q.   Good morning.

10   A.   First I'd like some clarification, if

11   you could, on some of the answers you provided

12   Staff counsel at the outset of your

13   cross-examination.

14   Is it true that in the rebuttal

15   testimony, several of the Staff witnesses

16   recommended that Grain Belt be required to perform

17   certain additional studies?

18   A.   I don't know if it was several

19   witnesses. Ms. Kliethermes certainly did.

20   Q.   Staff anyway recommended additional

21   studies be performed?

22   A.   Yes.

23   Q.   Do you recall that she recommend that

24   Staff and other parties have the opportunity to

25   comment at least on some of those studies?

```
 1          A.    Yes.

 2          Q.    Is it correct that some of the Staff

 3   studies recommended were included in Grain Belt's

 4   surrebuttal testimony?

 5          A.    Some of them, yes.

 6          Q.    Pardon?

 7          A.    Some of them, yes.

 8          Q.    So contrary to Staff's position at

 9   least, none of the parties have had the opportunity

10   to comment on those studies which you included in

11   your surrebuttal; is that correct?

12          A.    Not to provide comments, no.

13          Q.    You're aware of the fact, are you

14   not, that the Secretary of Energy may designate any

15   geographic area experiencing electric transmission

16   capacity constraints or congestion as a national

17   interest electric transmission corridor?

18          A.    Actually, I do not agree with that

19   statement.

20                MR. AGATHAN:  May I approach the

21   witness?

22                JUDGE BUSHMANN:  You may.

23   BY MR. AGATHAN:

24          Q.    I am going to hand you a copy of a

25   National Congestion Study issued December 2009 by
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 1   the U.S. Department of Energy. If I could direct

 2   your attention to page Roman numeral V11. Does

 3   this document not say that the Secretary of Energy

 4   may designate any geographic area experiencing

 5   electric transmission capacity constraints or

 6   congestion as a national interest electric

 7   transmission corridor?

 8   A.   That text is in this study, yes.

 9   Q.   And does it also say, the next

10   paragraph, same page, in August 2006 the department

11   published its first National Electric Transmission

12   Congestion Study. In 2007, based on the findings

13   of that study and after considering the comments of

14   stakeholders, the secretary designated two national

15   corridors, one in the mid-Atlantic area and one

16   covering southern California and part of western

17   Arizona?

18   A.   The document does say that.

19   Q.   Thank you. Back in November of last

20   year, Grain Belt issued what you called a request

21   for information or RFI to potential wind developers

22   in and around western Kansas; is that correct?

23   A.   Yes.

24   Q.   And you asked the wind developers to

25   give you certain information about the wind

 1   projects which they might be looking at developing?

 2   A.   I would say we asked them for

 3   information on projects they are developing.

 4   Q.   Right. I'm going to distribute a

 5   document marked as Exhibit 326, which purports to

 6   be an 18-page packet of information regarding your

 7   request for information to the wind developers.

 8   Can we call the request for information your RFI?

 9   A.   Yes, I'll understand.

10   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

11   NO. 326 WAS MARKED FOR IDENTIFICATION BY THE

12   REPORTER.)

13   BY MR. AGATHAN:

14   Q.   Do you have a copy of what is marked

15   as Exhibit 326 with you?

16   A.   I do.

17   Q.   You'll notice it's compiled from two

18   different sources, and I'll submit to you that the

19   first six pages are from your website, and then the

20   last 12 are from your responses to one of our data

21   requests. And then, just to be clear, I added the

22   exhibit page numbers at the bottom right corner of

23   each page, just for purposes of reference.

24   My question is, does Exhibit 326

25   appear to be material which was published on the

 1   **website regarding your RFI to wind developers in**

 2   **western Kansas?**

 3   A.   I don't know whether this was

 4   published on our website.

 5   **Q.   But it was material sent to the wind**

 6   **developers in western Kansas?**

 7   A.   I don't remember this specific

 8   material. It could have been sent to them.

 9   **Q.   Pardon?**

10   A.   It's possible. I don't remember this

11   specific material.

12   **Q.   Does it appear to be material which**

13   **was prepared by Grain Belt Express?**

14   A.   It does.

15   **Q.   And it covers the RFI procedure?**

16   A.   Yes.

17   **Q.   Grain Belt only distributed one set**

18   **of RFI material to the wind developers in western**

19   **Kansas, did they not?**

20   A.   I don't know.

21   **Q.   One formal set of documents such as**

22   **this?**

23   A.   I expect it was only one, but I was

24   not deeply involved in the details of the RFI.

25   **Q.   You say at page 15 of your direct**

 1   testimony, lines 5 to 6, that you received

 2   responses to the RFI from 14 different wind

 3   developers covering 26 different wind farms; is

 4   that correct?

 5   A.   One moment, please. That's correct.

 6   Q.   So one or more of the wind developers

 7   obviously sent you information regarding two or

 8   more wind farm sites, correct?

 9   A.   Yes.

10   Q.   Looking at the packet of information

11   here in the top of the second page of the exhibit,

12   first long paragraph there, you told the wind

13   developers that the information they would provide

14   to you would be used, among other things, in trying

15   to convince regulators that your proposed line was

16   really needed; is that correct?

17   A.   It does discuss our using RFI data to

18   communicate the need to regulators and

19   stakeholders. I wouldn't characterize it exactly

20   the way you did.

21   Q.   Looking at the second long paragraph

22   on that same page, you made it clear to the wind

23   developers that the RFI was in no way a commitment

24   to enter into any kind of transaction, right?

25   A.   Yes.

1   Q.   And you told them in that same

2 paragraph that none of the information provided by

3 respondents is binding and that it is provided

4 solely for informational purposes?

5   A.   I'm sorry. Which paragraph are you

6 in?

7   Q.   That same paragraph, the second

8 paragraph, starting the second line.

9   A.   That's correct.

10   Q.   And the respondents there as you use

11 that term are wind developers, right?

12   A.   Again, I'm not familiar with this

13 document, but in this context it appears that it

14 would be respondents. The respondents would be the

15 wind developers.

16   Q.   Right.

17   A.   Excuse me.

18   Q.   And near the end of the next

19 paragraph, third paragraph there, you told the wind

20 developers that you would be issuing a press

21 release summarizing the number of generators who

22 responded, right?

23   A.   I'm sorry. Which paragraph are you?

24   Q.   I'm at the bottom of the third main

25 paragraph.

 1   A.   Yes.

 2   Q.   And is it true that if developers

 3   gave you wind data that you found useful in

 4   obtaining regulatory approvals, that could help

 5   their ranking with you when it came time for

 6   bidding on capacity?

 7   A.   No.

 8   MR. AGATHAN: May I approach the

 9   witness?

10   JUDGE BUSHMANN: You may.

11   BY MR. AGATHAN:

12   Q.   Mr. Berry, I'm going to hand you Data

13   Request No. 40 which was sent to you with your

14   response provided, and ask you to please read into

15   the record the data request and your response.

16   A.   Data Request No. 40. With respect to

17   page 20 of Grain Belt's application to the FERC in

18   Docket ER14-409, please describe the means by which

19   a customer might meet the fourth criteria listed

20   there, ability to assist with project's development

21   needs, including obtaining necessary signing

22   approvals and governmental authorizations.

23   Response: Developing an

24   interregional transmission line such as the Grain

25   Belt Express requires the achievement of a number

 1   of development milestones over many years in

 2   several different jurisdictions. There are many

 3   scenarios over the course of developing a project

 4   in which a potential customer could assist Grain

 5   Belt Express in this process.

 6   For example, a potential customer

 7   could provide Grain Belt Express with property

 8   rights that are useful in constructing and

 9   operating the transmission line. Alternatively, a

10   potential customer could provide wind data that is

11   useful to Grain Belt Express is seeking regulatory

12   approvals.

13   **Q.   Thank you.**

14   MR. AGATHAN: Judge, if I might, I

15   don't mind breaking at any time that you wish to.

16   I have at least an hour of cross-examination, but I

17   don't mind breaking at any time.

18   JUDGE BUSHMANN: Is this a convenient

19   point for you in your cross?

20   MR. AGATHAN: It is.

21   JUDGE BUSHMANN: Any other parties

22   have an objection to doing that?

23   Why don't we break for lunch. Let's

24   resume at about 12:45, approximately.

25   (A BREAK WAS TAKEN.)

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 1   JUDGE BUSHMANN: Let's go back on the

 2   record. We left off with cross-examination from

 3   Missouri Landowners Alliance. Mr. Agathan, you may

 4   proceed whenever you're ready.

 5   MR. AGATHAN: Thank you, Judge.

 6   BY MR. AGATHAN:

 7   **Q.   Mr. Berry, we were discussing**

 8   **Exhibit 326, the packet of RFI material, when we**

 9   **broke. Do you recall that?**

10   A.   I do.

11   **Q.   If you turn to page 8 as I had**

12   **numbered it, in the form there you asked**

13   **prospective wind developers for their annual**

14   **capacity factor, paren, name plate, close paren,**

15   **right?**

16   A.   That's correct.

17   **Q.   And then you asked the wind**

18   **developers to provide you in the form at page 10 of**

19   **this exhibit with an estimate of the average wind**

20   **speed at their respective wind farms; is that**

21   **right?**

22   A.   That's correct.

23   **Q.   And then at page 11 you asked for**

24   **what you call the pricing at project busbar; is**

25   **that correct, page 11?**

1   A.   Correct.

2   Q.   Did you do an audit of the wind data

3   the developers said they'd collected at the time

4   near their respective wind farms?

5   A.   I reviewed it for reasonableness.   I

6   can't say I did a full audit.

7   Q.   You just looked at the data and

8   thought it was reasonable?

9   A.   I looked at the data, compared it to

10   some of our own met tower data that we have in the

11   region, compared it to our own experience looking

12   at met studies in the region that, on the basis of

13   all of that, sounded reasonable.

14   Q.   But you didn't go back to the wind

15   developers and ask them for their sources and then

16   do an audit of their numbers?

17   A.   No, I did not.

18   Q.   Some of the wind farms had different

19   wind speeds than others, did they not?

20   A.   Yes.

21   Q.   So average wind speeds will vary from

22   one location to another?

23   A.   Yes.

24   Q.   What would cause that variation?

25   A.   Any number of things. Wind speed,

1   changes with location. It could be topographic

2   features. It could be weather patterns. Could be

3   tree cover.

4   Q.   And probably others?

5   A.   Quite possibly.

6   Q.   Did you do an audit of how the wind

7   developers translated the wind data they collected

8   at their towers into the estimated wind speeds at

9   the site of the wind farms, and an audit meaning

10 going back and reviewing the data that they

11 supplied to you and actually verifying the

12 specifics of how they made that calculation?

13   A.   Again, I performed the same kinds of

14 checks for reasonableness I described a minute ago.

15 I didn't do a full audit of their calculations.

16   Q.   You didn't go back and actually look

17 through the data that they provided and review how

18 they translated the wind speed data?

19   MR. ZOBRIST: Objection. Asked and

20 answered at least twice.

21   JUDGE BUSHMANN: Your response,

22 Mr. Agathan?

23   MR. AGATHAN: I withdraw it. I

24 agree.

25 BY MR. AGATHAN:

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 1          Q.    Is it fair to say that the

 2   respondents to your RFI used a number of different

 3   methodologies in developing their projected

 4   capacity factors?

 5          A.    I'd actually say they're probably all

 6   similar.

 7          Q.    You don't have any firsthand

 8   knowledge of how any of the wind developers

 9   calculated their projected capacity factors, do

10   you?

11          A.    I do have some firsthand knowledge.

12                MR. AGATHAN:  May I approach the

13   witness?

14                JUDGE BUSHMANN:  You may.

15   BY MR. AGATHAN:

16          Q.    I'm handing you a copy, Mr. Berry, of

17   Data Request No. 3.5 and your response, and I would

18   ask you to read into the record the data request

19   itself, and then I'm just looking for the first

20   part of the response, but I'm sure you'll want to

21   put the whole response in.  Feel free to do so.

22          A.    It says, While Grain Belt Express

23   does not know how any RFI respondent derived its

24   capacity factor -- excuse me -- derived its annual

25   capacity factor, the industry standard method is to
```

1 use local meteorological data in combination with

2 long-term reference wind data such as at an airport

3 or other meteorology station to predict long-term

4 wind speeds. A wind developer then applies a

5 particular turbine model at a specific cub height

6 to its long-term wind speed projection, resulting

7 in a forecasted annual capacity factor.

8   Q.   And the data request, the question to

9 you to which you read the response was, How did the

10 wind farms derive or calculate the annual capacity

11 factors which they submitted on the RFI forms?

12   A.   That's correct.

13   Q.   Did you define for the wind developer

14 what you were asking for when you requested their

15 pricing at project's busbar?

16   A.   I'm not aware that we did.

17   Q.   Did you tell the respondents, the

18 wind developers, that you would impose any kind of

19 penalty, financial or otherwise, if you found they

20 provided any inaccurate information to you in their

21 responses to the RFI?

22   A.   No.

23   Q.   And this RFI exercise was done

24 independently from the process you may undertake

25 later if you actually solicit bids for capacity on

 1   the line, right?

 2   A.   Correct.

 3   Q.   So none of the information given in

 4   the RFI will in any way be binding on the wind

 5   developers if they decide later to buy capacity on

 6   your line, correct?

 7   A.   Yes.

 8   Q.   And if they're able to buy capacity

 9   on the line, even though they may have told you the

 10   busbar price for the energy was some figure, and

 11   let's just call it X, they could charge whatever

 12   the market will bear when it actually comes time to

 13   selling the energy to utilities like those in the

 14   MISO or PJM footprints?

 15   A.   I generally agree with that, but I

 16   wouldn't say they could -- exactly they could

 17   charge whatever the market would bear.

 18   Q.   Well, they will have the ability to

 19   negotiate with the load-serving utilities for the

 20   price, right?

 21   A.   Correct.

 22   Q.   And presumably that will be based on

 23   market forces?

 24   A.   Certainly one factor.

 25   Q.   On the RFI form itself at the top of

1   page 11 of Exhibit 326, you stated as follows, did

2   you not: Clean Line acknowledges that pricing is

3   indicative, not binding, and provided only for

4   informational purposes?

5   A.   Correct.

6   Q.   On page 11, Exhibit 326, you say that

7   the pricing figure that you asked for from the

8   respondents, from the wind developers, was required

9   information for all projects, right?

10   A.   Yes.

11   Q.   And despite saying it was mandatory,

12 isn't it true that a dozen or so of the respondents

13 didn't provide any pricing data at all?

14   A.   I know some did. I don't know the

15 number.

16   Q.   Some did not?

17   A.   Correct. Some did. Some did not.

18   Q.   On the RFI forms which you provided

19 to us, you redacted all the information on the form

20 which identified where the wind farm was located;

21 is that correct?

22   A.   We did provide information about

23 where the respondents were located, but as to the

24 specific form, we redacted the location.

25   Q.   Is it fair to say that a slightly

 1   **windier site may produce substantially more**

 2   **electric power than a less windy site?**

 3   A.   It can.

 4   MR. AGATHAN: May I approach the

 5   witness?

 6   JUDGE BUSHMANN: You may. You don't

 7   need to ask each time.

 8   MR. AGATHAN: Pardon?

 9   JUDGE BUSHMANN: You don't need to

10   ask each time.

11   MR. AGATHAN: Thank you. Just a

12   habit.

13   BY MR. AGATHAN:

14   Q.   **Mr. Berry, I'm going to hand you a**

15   **copy of some data requests that we sent to Grain**

16   **Belt and the responses and ask you to read into the**

17   **record Items 3 and 4, if you would, please,**

18   **question to you and your response.**

19   A.   No. 3, All or nearly all of the

20   prospective wind farms responding to the RFI based

21   their projected wind speeds at their wind farms at

22   least in part on data collected from meteorological

23   towers located on the site of their respective wind

24   farm. Grain Belt can neither admit nor --

25   Q.   **Excuse me. This is your response**

 1   **now, right?**

 2   A.   Yes.   Response: Grain Belt can

 3   neither admit or deny the request as it does not

 4   have direct knowledge of all of the facts and data

 5   upon which all or nearly all of the respondents to

 6   the RFI based their projected wind speeds.

 7   **Q.   Okay.   No. 4 now, please.**

 8   A.   Projected busbar costs and busbar

 9   prices of energy at a prospective wind farm are in

10   part a function of the projected average wind speed

11   at that wind farm.   The company denies --

12   **Q.   This is your response now?**

13   A.   Yes.   I'm sorry. Response: The

14   company denies that the projected busbar costs and

15   busbar prices of energy at a prospective wind farm

16   are in part function of the projected average wind

17   speed at that wind farm, except that the company

18   admits that such costs and prices are affected by

19   you a multitude of variables, including projected

20   average wind speeds at that wind farm.

21   **Q.   Thank you.**

22   MR. AGATHAN: Your Honor, I'll offer

23   Exhibit 326 at this point.

24   JUDGE BUSHMANN: Any objections?

25   MR. ZOBRIST: No objection.

 1   JUDGE BUSHMANN: Exhibit 326 is

 2   received into the record.

 3   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

 4   NO. 326 WAS RECEIVED INTO EVIDENCE.)

 5   BY MR. AGATHAN:

 6   Q.   I have some questions now about how

 7   you used the information from the RFI in

 8   calculating the cost of the Kansas wind.

 9   First you used the RFI responses when

10   you said in your direct testimony that the average

11   cost from the lowest priced 4000 megawatts

12   responding to the RFI was 2 cents per kilowatt

13   hour, right?

14   A.   Yes.

15   Q.   So you took the lowest price

16   4000 megawatts from the RFI responses, used the

17   busbar prices provided by those developers, and

18   then you just did the math essentially?

19   A.   That's correct.

20   Q.   And you came up with a price of

21   2 cents per kilowatt hour?

22   A.   Correct.

23   Q.   And you chose the 4000 megawatt level

24   to price the energy because that's essentially

25   enough capacity to fully utilize the line?

 1   A.   Yes.

 2   Q.   And Grain Belt also used the same

 3   2 cents per kilowatt hour figure from the lowest

 4   4000 megawatts in its presentations to prospective

 5   buyers of capacity on your line, did you not?

 6   A.   We have used that figure, yes.

 7   Q.   Have any of the wind developers in

 8   that group with the lowest 4000 megawatts signed a

 9   contract to buy capacity on your line?

10   A.   Not a binding commitment.

11   Q.   So you had no binding commitment of

12   any kind from any of the developers you relied on

13   when you came up with your figure of 2 cents per

14   kilowatt hour, right?

15   A.   That's correct.

16   Q.   Is it true that you expect

17   substantially more than 4000 megawatts of capacity

18   to be connected to your Kansas converter station?

19   A.   It's possible.

20   Q.   Up to 4700 megawatts?

21   A.   It's possible.

22   Q.   So if you calculated the lowest price

23   of just 4000 megawatts at the Kansas converter

24   station, that will not be the lowest price of the

25   4,007 (sic) megawatts, if that's how many you

 1 connect, which actually sell energy from the Kansas

 2 wind farm, will it?

 3   A.   It's possible. I haven't drawn the

 4 boundary at 4700 megawatts.

 5   Q.   Right. But any additional amount

 6 above 4000 is likely to be at a highest price than

 7 the lowest price 4000, right?

 8   A.   It's certainly not in the lower price

 9 by definition. Whether it's higher or not, I

10 haven't checked.

11   Q.   So you don't know if -- what you're

12 saying is you don't know if the next set of

13 megawatts above 4000 is higher or equal to the

14 first 4000?

15   A.   That's correct.

16   Q.   Did you give us the information which

17 would allow us to calculate the cost of the lowest

18 4700 megawatts connected to the line?

19   A.   To be totally honest, I do not know.

20   Q.   Well, you would not identify which

21 wind developers were included in the group of the

22 4000 lowest priced, right?

23   A.   That's correct.

24   Q.   Another question about the

25 calculation. Just to illustrate, if you say the

1   lowest price response to your RFI was say 1.9 cents

2   per kilowatt hour and the developer said they had

3   500 megawatts of capacity, did you include the

4   entire 500 megawatts at 1.9 cents when you

5   calculated the price of the lowest cost 4000?

6   A.   If all of that 500 megawatts was

7   within the lowest 4000, then yes.

8   Q.   Isn't it likely that none of the wind

9   farms will buy capacity on the line in the full

10   amount of the name plate rating of their turbines?

11   A.   It's possible that some could buy

12   less than that.

13   Q.   Well, in fact, isn't it even more

14   likely that wind farms will buy capacity on the

15   line, we'll say 80 or 90 percent of their name

16   plate capacity?

17   A.   That's very possible.

18   Q.   It's that more likely than they'll

19   buy 100 percent?

20   A.   I'd say yes, it's more likely.

21   Q.   If the wind farms in your lowest cost

22   4000 megawatts of capacity do not all buy capacity

23   on the line in the full amount of the name plate

24   capacity, then you'll need to go to the next

25   highest price level in order to calculate a price

 1   **for the lowest cost 4000 megawatts, right?**

 2   A.   Well, as I mentioned before, the

 3   process of actually selling capacity and marketing

 4   energy from the line will be a competitive process

 5   that we haven't done yet. So I think we're sort of

 6   mixing points in time and processes to say if

 7   someone doesn't buy capacity, we change the RFI

 8   calculations.

 9   Q.   Right. And what I'm getting at is

10   **how you calculated your figure for the lowest**

11   **4000 megawatts which you used throughout your**

12   **testimony.**

13   A.   Okay.

14   Q.   **The question is, if the wind farms**

15   **and your lowest cost 4000 megawatts of capacity do**

16   **not all buy capacity on your line in the amount of**

17   **their name plate capacity, then you'd need to go to**

18   **the next highest price level in order to calculate**

19   **a cost for the lowest cost 4000 megawatts, correct?**

20   A.   Well, my answer is the same. We're

21   sort of mixing two things here, which is buying

22   capacity and the RFI. I will agree that if a wind

23   farm states that they have no interest in supplying

24   our line at a future date, we could reconsider our

25   calculation.

 1   Q.   Or if they say they have say

 2   500 megawatts but that they're not going to buy

 3   500 megawatts, then you would not be able to

 4   include the full 500 megawatts in your calculation

 5   of the lowest cost 4000?

 6   A.   I don't agree with that.

 7   Q.   Why not?

 8   A.   We're making a claim here about the

 9   lowest 4000 megawatts of wind generation. So if

10   they -- the wind farm in question here bought

11   slightly less capacity, I don't know that we'd

12   necessarily need to revise what we say about the

13   lowest cost 4000 megawatts of wind generation.

14   Q.   Let's try this one more time. If one

15   of the wind developers said they had 500 megawatts

16   of capacity, name plate capacity, at some figure

17   say 1.9 cents, would you have included the full

18   500 megawatts in your calculation of the lowest

19   cost 4000?

20   A.   Yes. We used the full name plate

21   calculation of the wind farm in our calculation.

22   Q.   Thank you. Credit rating will be one

23   of the criteria that you use to decide if you'll

24   sell capacity on your line to a wind farm, correct?

25   A.   I would say creditworthiness

1   generally, of which credit rating is one component.

2   Q.   Do you have a particular credit

3   rating which you would use as a cutoff?

4   A.   We would typically look for credit

5   support from entities with an investment grade

6   credit rating.

7   Q.   Which is what?

8   A.   Triple B minus from Standard & Poors

9   or BAA3 from Fitch. However, I would say that

10   there are alternative forms of credit support, and

11   it's also possible to establish the

12   creditworthiness of any entity that does not have a

13   credit rating.

14   Q.   For example, a bank line of credit or

15   something?

16   A.   That's one example, yes.

17   Q.   2 cents per kilowatt hour for the

18   lowest price 4000 megawatts was one of the cost

19   figures that you used in your direct testimony,

20   right?

21   A.   Yes, I do mention it in my direct

22   testimony.

23   Q.   And then you also had a cost

24   calculation of Kansas wind as part of your

25   levelized cost analysis; is that correct?

 1   A.   That's correct.

 2   Q.   And the results of that analysis are

 3   depicted on the bar charts at page 18 of your

 4   direct testimony?

 5   A.   Yes.

 6   Q.   Looking at the gray bars there on

 7   page 18, you show a levelized cost for the Grain

 8   Belt project which equates to 3.4 cents per

 9   kilowatt hour; is that correct?

10   A.   Including the capacity value of the

11   resource, yes.

12   Q.   And does that supposedly represent

13   the average levelized cost of energy from wind

14   farms which you expect to connect to your line?

15   A.   No.

16   Q.   What does it represent?

17   A.   It represents the price of energy,

18   including generation and transmission, delivered to

19   Missouri or Indiana with two adjustments. One

20   adjustment is the capacity value of the resource,

21   which eliminates the need to add another resource

22   such as a simple cycle turbine for meeting peak

23   load, and another adjustment based on the time of

24   day delivery profile.

25   So we adjusted the value of the

 1   energy by the LMPs simulated in Mr. Cleveland's

 2   work to make sure that we were taking into account

 3   the fact that different resources produce at

 4   different times.

 5   Q.   But do these figures represent, as

 6   adjusted and as you just explained, the costs from

 7   the wind farms which you expect to connect to your

 8   line?

 9   A.   Including the cost of transmission.

10   Q.   In the last two lines of your

11   testimony there at page 18 you say that your

12   Schedule DAB-3 contains the complete list of

13   assumptions underlying the levelized cost analysis

14   along with sources of those assumptions, right?

15   A.   Yes.

16   Q.   Is it fair to say that one of the

17   critical assumptions in your levelized cost

18   analysis for both Kansas and Missouri wind

19   generation is the capacity factor which you used in

20   those calculations?

21   A.   Yes.

22   Q.   If you turn to Schedule DAB-3,

23   page 1, near the middle of that page you indicate

24   that you used a capacity factor for Kansas wind of

25   55 percent; is that correct?

 1   A.   I ran a range, but 55 percent was the

 2   midpoint value of the range.

 3   **Q.   That's your base case figure, so to**

 4   **speak?**

 5   A.   Correct.

 6   **Q.   In explaining where you got that**

 7   **55 percent capacity factor for the Kansas wind**

 8   **generators, do you recall saying in a data request**

 9   **response to Show-Me Landowners group something to**

10   **the following effect: The lowest price for**

11   **4000 megawatts responses to the Grain Belt request**

12   **for information indicated project capacity factors**

13   **of 52 percent with today's turbine technologies.**

14   **Since wind turbine technologies have improved**

15   **dramatically in the last several years, continued**

16   **improvement is likely. Therefore, a 55 percent**

17   **estimate is reasonable for the Grain Belt project.**

18   A.   I believe that's what I said.

19   **Q.   So according to that statement, the**

20   **capacity factor you used for the Kansas wind in**

21   **your levelized cost analysis as depicted on page 18**

22   **starts with the responses that you received to the**

23   **RFI, correct?**

24   A.   It's certainly one factor we

25   considered.

 1   Q.   That was the starting point,

 2   according to your response to Show-Me?

 3   A.   I would say we arrived at a

 4   55 percent capacity factor. We took into account

 5   the RFI results. We took into account future

 6   turbine technology. And we also applied our

 7   professional judgment about capacity factors in the

 8   area.

 9   Q.   That's not mentioned anywhere in your

10   response to Show-Me, is it?

11   A.   Which component?

12   Q.   Your expertise and experience.

13   A.   I don't believe it was.

14   Q.   You don't have any firsthand

15   knowledge, I think we said, of how those capacity

16   factors were calculated by the wind developers that

17   responded to the RFI, correct?

18   A.   Well, I do have firsthand knowledge

19   of the methods that I think were likely used

20   because they're industry standards. I haven't the

21   firsthand knowledge of the details of any

22   particular wind study that a developer has

23   prepared.

24   Q.   So you'd just be speculating that

25   they used the same standards that you think are

 1   industry standards?

 2   A.   I don't think it's speculation, but I

 3   don't know with a hundred percent certainty.

 4   Q.   Can you point to any qualification of

 5   the cost of the Kansas wind in your direct

 6   testimony which is not dependant in part at least

 7   on the responses to the RFI forms?

 8   A.   I wouldn't say the analysis in my

 9   levelized cost of energy model is dependant on the

10   RFI responses. It's certainly one factor we took

11   into account in developing --

12   Q.   According to your answer to Show-Me,

13   that was the starting point, right?

14   A.   As I said, it was one factor we took

15   into account in developing our estimate.

16   Q.   Let's turn to page 27 of your direct

17   testimony. At lines 9 to 11 you say that Kansas

18   has the potential for more than 760,000 megawatts

19   of wind generation in areas which will support

20   capacity factors of greater than 40 percent; is

21   that correct?

22   A.   It is.

23   Q.   And as you note in Footnote 12 there,

24   the basis for that figure is a publication by the

25   National Renewable Energy Laboratory?

 1   A.   Yes.

 2   Q.   I'm distributing a copy of what's

 3   been marked as Exhibit 327, which is the cover page

 4   and two of the sheets of data from the publication

 5   that you cite there.

 6   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

 7   NO. 327 WAS MARKED FOR IDENTIFICATION BY THE

 8   REPORTER.)

 9   BY MR. AGATHAN:

10   Q.   Do you have a copy of Exhibit 327 in

11   front of you?

12   A.   I do.

13   Q.   Is that the cover page and two other

14   pages from the material that you cited at page 27,

15   Footnote 12 of your direct testimony?

16   A.   It appears to be.

17   Q.   The exhibit says it was published by

18   NREL, all caps; is that correct?

19   A.   Yes.

20   Q.   Could you explain what that

21   organization is?

22   A.   It's the National Renewable Energy

23   Laboratory. It's a research laboratory. It's a

24   part of the federal government.

25   Q.   Part of what?

1   A.   The federal government.

2   Q.   **The second and third pages of the**

3 **exhibit show wind data for different states**

4 **separately, correct?**

5   A.   Yes.

6   Q.   **And these particular pages as part of**

7 **Exhibit 327 show data for just the areas in the**

8 **states which have the potential for a gross**

9 **capacity factor of 40 percent or greater; is that**

10 **correct?**

11   A.   For a gross capacity factor, not for

12 a net capacity factor, correct.

13   Q.   **And not all the areas of the state**

14 **would have enough wind to reach a capacity factor**

15 **of 40 percent, would they?**

16   A.   I'm sorry. Which state are you

17 referring to?

18   Q.   **Well, in any of the states listed**

19 **there, not all areas of any of those states would**

20 **have enough wind to reach a capacity factor of**

21 **40 percent or higher? In other words, some areas**

22 **would only reach a capacity factor of 30 percent?**

23   A.   Correct.

24   Q.   **The data on the far right columns of**

25 **the printed material, not the material I have**

 1   written in, shows the estimated gigawatt hours of

 2   annual wind generation in the areas which could

 3   reach the 40 percent capacity factor level, right?

 4   A.   Yes.

 5   Q.   And a column to the left of that

 6   shows the projected installed capacity and

 7   megawatts of potential wind farms in those areas of

 8   the state?

 9   A.   I wouldn't characterize that as

10   projected installed capacity.

11   Q.   It's listed as installed capacity,

12   correct?

13   A.   It is labeled as that, yes.

14   Q.   Looking at the data for Kansas, it

15   shows installed capacity in areas which have the

16   potential capacity factor of 40 percent or more to

17   be 760,323.9 correct?

18   A.   Yes.

19   Q.   And that's the same source as the

20   figure that you quoted where you said Kansas has

21   the potential for more than 760,000 megawatts of

22   wind capacity; is that correct?

23   A.   Yes.

24   Q.   Now, with a total capacity figure and

25   the energy output figures as shown on this exhibit,

 1   we could calculate the capacity factor for the

 2   760,000 megawatts of Kansas wind which you referred

 3   to in your testimony, right?

 4   A.   You could. I don't think it would be

 5   a meaningful figure.

 6   Q.   Well, if we multiplied the megawatts

 7   of capacity there by 8,760 hours, that would give

 8   us a theoretical maximum output for those plants in

 9   terms of megawatt hours, right?

10   A.   For these potential plants, yes.

11   Q.   And then if we divide that number by

12   the projected energy figure, in this case the

13   3,024,280 gigawatt hours, that would give us the

14   annual capacity factor, would it not?

15   A.   No, it would not.

16   Q.   Did you hear Mr. Goggin testify

17   yesterday --

18   A.   I did.

19   Q.   -- regarding these numbers?

20   A.   I'm sorry. Could you repeat the

21   question?

22   Q.   Yes. Did you hear Mr. Goggin testify

23   -- I hope I'm pronouncing his name right --

24   regarding the fact that, in his opinion, one could

25   derive a capacity factor from the figures that

 1   we've just been talking about?

 2   A.   I was here for his testimony. I

 3   don't remember that particular part of it.

 4   Q.   Well, if my math is correct and we do

 5   the calculation that we've been talking about, you

 6   would have a capacity factor for Kansas of

 7   45 percent, would you not?

 8   A.   In the incredibly hypothetical case

 9   that you installed 760,000 megawatts across the

10   state, then I haven't done the math here, but you

11   could calculate the capacity factor.

12   Q.   And does the capacity factor listed

13   there for Kansas of 45 percent look to be

14   approximately correct, subject to check?

15   A.   Subject to check, it seems about

16   right.

17   Q.   And the figure for Iowa 44 percent,

18   subject to check?

19   A.   Yes.

20   Q.   And on the next page, the figure for

21   Missouri, subject to check, of 41 percent, subject

22   to check?

23   A.   Yes. Again, I don't think that

24   figure's particularly meaningful, but the math

25   seems reasonable, subject to check.

 1   MR. AGATHAN: I'll offer Exhibit 327,

 2 your Honor.

 3   JUDGE BUSHMANN: Objections?

 4   MR. ZOBRIST: Again, we don't have

 5 any objection if we're permitted to supplement

 6 these few pages with the complete report, Judge.

 7   JUDGE BUSHMANN: That will be fine.

 8 Exhibit 327 is received into the record.

 9   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

10 NO. 327 WAS RECEIVED INTO EVIDENCE.)

11 BY MR. AGATHAN:

12   Q.   Going back to your Schedule DAB-3,

13 page 1, you say that you got your 30 percent

14 capacity factor for Missouri wind from wind map

15 data on an internet site which you reference there;

16 is that correct?

17   A.   One moment, please. Yes. I

18 consulted that in preparing the estimate and the

19 range.

20   Q.   I'd like to distribute Exhibit 328

21 now at this point, which consists of a first page

22 titled Wind Exchange. Depicts a small map of

23 Missouri, followed by three pages of accompanying

24 wind data from the NREL.

25   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

 1   NO. 328 WAS MARKED FOR IDENTIFICATION BY THE

 2   REPORTER.)

 3   BY MR. AGATHAN:

 4   Q.   I recognize the wind map is not color

 5   coded, so I won't represent that that shows much of

 6   anything. Just in its original form it would have

 7   shown various wind speeds within the state of

 8   Missouri, right?

 9   A.   Yes.

10   Q.   If you had the color-coded version?

11   A.   Yes.

12   Q.   Does Exhibit 328 consist of pages

13   from the document that you used to estimate the

14   30 percent capacity factor for wind in Missouri?

15   A.   I don't actually think it was this

16   document.

17   Q.   Pardon?

18   A.   I don't believe it was this document

19   I consulted.

20   Q.   This is not the document that's cited

21   in your reference there at DAB-3, page 1?

22   A.   I looked at the map, yes.

23   Q.   And could you tell from that map that

24   the capacity factor in Missouri was 30 percent?

25   A.   Looking at that map, the range of

1   wind speeds, being aware of conditions for wind

2   development in Missouri and applying my own

3   experience, I could come up with an estimate and a

4   range, yes.

5   Q.   But this is the -- Exhibit 328 is the

6   source data which you cited in your own schedule

7   there from where you derived the 30 percent figure

8   for Missouri, correct?

9   A.   The map is, yes.

10   Q.   And do the other two pages include

11   data from NREL from February of 2010?

12   A.   Yes.

13   Q.   Various states are shown, much like

14   the data that we were talking about earlier?

15   A.   Yes.

16   Q.   If we go to the second page there, it

17   shows the state of Missouri, correct?

18   A.   This is the third page of the

19   document overall, the second page of tables?

20   Q.   Yes.

21   A.   Yes, it does.

22   Q.   If we look across from Missouri, the

23   last two columns show installed capacity and then

24   annual generation, correct?

25   A.   Yes. And again, this is potential

1   installed capacity, not actual installed capacity.

2   Q.   Sure. And this is only in areas

3   where the gross capacity factor goes up to

4   30 percent, correct, as opposed to the 40 percent

5   we were looking at earlier?

6   A.   Yes.

7   Q.   And if we did the math again, subject

8   to check, would you assume that the capacity factor

9   as we were discussing before for Missouri comes out

10   to 33 percent, subject to check?

11   A.   Yes.

12   Q.   And that data for Missouri only

13   includes areas -- or includes all of the areas of

14   Missouri which had the potential for a capacity

15   factor of 30 percent, right?

16   A.   No, not exactly.

17   Q.   Well, at the top of the columns

18   there's a notation says windy land areas greater

19   than equal to 30 percent gross capacity factor at

20   80 meters. What does that mean?

21   A.   I don't -- it seems clear. I don't

22   know how to elaborate on it.

23   Q.   Doesn't that indicate that the data

24   here is based on areas of Missouri which would

25   sustain a capacity factor of 30 percent or greater?

1   A.   Yes.   And there are some exclusions

2   applied, as discussed in the text here.

3   Q.   **Sure.   Just as there were for your**

4   **data that went up to 40 percent, correct?**

5   A.   I'm sorry.   What do you mean by my

6   data that went up to 40 percent?

7   Q.   **The last exhibit we were looking at,**

8   **Exhibit 327, included areas where 40 percent gross**

9   **capacity factor could be maintained, right?**

10   A.   Correct.

11   Q.   **And the same limitations would apply**

12   **to both cases, would it not?**

13   A.   I believe so.

14   Q.   **Is it generally true that if you're**

15   **looking at areas which would sustain a capacity**

16   **factor of 30 percent vis-a-vis those that could**

17   **sustain a capacity factor of 40 percent, the**

18   **average capacity factor in the latter would likely**

19   **be higher than in the former?**

20   A.   Yes, it would.

21   MR. AGATHAN: I'll offer Exhibit 328,

22   your Honor.

23   JUDGE BUSHMANN: Any objections?

24   MR. ZOBRIST: No objection.

25   JUDGE BUSHMANN: It will be received

 1   into the record.

 2   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

 3   NO. 328 WAS RECEIVED INTO EVIDENCE.)

 4   BY MR. AGATHAN:

 5   **Q.   Is it fair to say in general that the**

 6   **higher the capacity factor of a wind turbine, the**

 7   **more energy it is likely to produce?**

 8   A.   No, not necessarily.

 9   **Q.   Is it likely to be capable of**

10   **producing more energy?**

11   A.   Not necessarily.

12   **Q.   Is there any correlation at all**

13   **between the capacity factor and the amount of**

14   **energy that a turbine can produce?**

15   A.   Certainly, yes.

16   **Q.   What is the relationship?**

17   A.   The capacity factor measures the

18   percentage of the total possible output of a wind

19   turbine that can be achieved based on a location,

20   assumptions about availability, and application of

21   losses to go from gross capacity factor to net

22   capacity factor, and the wind speeds.

23   **Q.   So why in general is not the higher**

24   **capacity factor capable of producing more energy?**

25   A.   If you want to look at energy, you

 1 also have to consider the capacity of that turbine

 2 and not just the capacity factor.

 3   Q.   Oh, right. So obviously if you have

 4 a turbine which is three times the size of a

 5 different turbine, you're producing more energy

 6 given the same capacity factor from the larger

 7 turbine, correct?

 8   A.   That's correct.

 9   Q.   So given turbines of the same size,

10 is it likely that the higher capacity factor will

11 produce more energy?

12   A.   Yes, by definition.

13   Q.   Thank you. If you go, please, to

14 Schedule DAB-1, page 2. Do you have that?

15   A.   I do.

16   Q.   You say there that for the

17 calculations on that schedule you used a capacity

18 factor for Iowa wind farms of only 38 percent,

19 correct?

20   A.   That's correct.

21   Q.   And 40 percent for Kansas wind farms?

22   A.   That's correct.

23   Q.   Is it true you simply estimated those

24 figures on the basis of what you called your

25 extensive experience?

1   A.   Yes. And, in fact, I'm familiar with

2   some of these specific projects.

3   **Q.   So that's the only basis you had was**

4   **your extensive experience for those particular**

5   **estimates?**

6   A.   Yes, they were based on my

7   experience.

8   **Q.   Only your experience?**

9   A.   Okay.

10   **Q.   I have one other point on capacity**

11 **factors. As we discussed earlier, you added an**

12 **extra 3 percent to the -- 3 percentage points to**

13 **the Kansas capacity factor to account for assumed**

14 **improvements in technology between the time when**

15 **the RFIs were completed and the time the turbines**

16 **were installed, correct?**

17   A.   That's one way of looking at it. I

18 also think it's true that the best sites today, as

19 you've heard from Mr. Langley in this case, they're

20 already at 55 percent.

21   **Q.   Well, for whatever reason you said**

22 **you added an extra 3 percentage points, correct?**

23   A.   To go from the RFI figure of

24 52 percent to the base case model figure of

25 55 percent, I added 3 percent, yes.

 1   Q.   To account for improved technology?

 2   A.   Yes.

 3   Q.   Did you add a similar increase to the

 4   capacity factor for the Missouri wind generation

 5   and, if so, where does that show up in your

 6   calculations?

 7   A.   I didn't explicitly. I did consider

 8   a range of capacity factors. I think in the case

 9   of Missouri there are many moving pieces in this.

10   Q.   So you did not explicitly add another

11   3 percentage points to account for improving

12   technology?

13   A.   Well, I also didn't have an RFI to

14   benchmark my Missouri capacity estimates.

15   Q.   So the answer is no?

16   A.   It's not really a yes or no question.

17   Q.   Well, is there anything in your

18   analysis which you can show us, point to which says

19   that you added an additional 3 percentage points or

20   any amount to account for improved technology in

21   your Missouri wind calculation?

22   A.   I considered a range, but no, I did

23   not specifically add 3 percent.

24   Q.   Or any specific percent?

25   A.   No.

```
 1            Q.    And wasn't the wind generation data

 2     based compilations of data three or four years

 3     older than the RFI data for the Kansas wind?

 4            A.    No, I wouldn't agree with that.

 5            Q.    When was the data for the Missouri

 6     wind calculations compiled?

 7            A.    Well, the wind speed data is older,

 8     you're correct.

 9            Q.    Older for which?

10            A.    For Missouri.

11            Q.    You're familiar, are you not, with

12     the annual Wind Technologies Report published by

13     the U.S. Department of Energy?

14            A.    Familiar with it, yes.

15            Q.    And you actually cited the report for

16     2012 in your direct testimony, did you not?

17            A.    I believe so.

18            MR. AGATHAN:  Your Honor, do I

19     understand that we're going to have the latest

20     version of that document offered in evidence?

21            MR. ZOBRIST:  It was offered this

22     morning and admitted.

23            MR. AGATHAN:  And we're all going to

24     have copies of it?

25            MR. ZOBRIST:  Right.  And there's a
```

1   copy with the court reporter right now.

2   MR. AGATHAN: I'll just skip the

3   questions that I had on that. And that means I

4   will not be offering Exhibit 229, which was going

5   to be a compilation of several pages from that

6   report.

7   BY MR. AGATHAN:

8   Q.   Your analysis does not include any

9   kind of comparison of the cost of Kansas wind as

10 delivered in Missouri to the cost for utilities in

11 Missouri to purchase renewable energy certificates,

12 does it?

13   A.   Not directly, no.

14   Q.   In fact, you told us you don't even

15 possess any information about the prices at which

16 the utilities in Missouri could purchase non-solar

17 RECs which comply for compliance with the State's

18 renewable energy standard; is that correct?

19   A.   In terms of the short-time prices,

20 that's correct.

21   Q.   So you don't have any knowledge about

22 the present price at which utilities in Missouri

23 could purchase non-solar RECs which qualify for

24 compliance with the State's RES?

25   A.   No.

 1   Q.   If you'd turn to page 13 of your

 2   direct testimony, starting at line 12. Are you

 3   there?

 4   A.   I am.

 5   Q.   You list there some of the major cost

 6   components which are included in a levelized cost

 7   of energy analysis, do you not?

 8   A.   I do.

 9   Q.   The components you list there are

10   capital costs, operating costs, taxes, cost of

11   debt, return on equity, any available subsidies,

12   and additional transmission costs, right?

13   A.   Yes.

14   Q.   Do you recall that when we asked you

15   for breakdown of those component costs for the

16   Kansas wind farms, you told us you don't have a

17   breakdown of those component costs?

18   A.   Yes. The way LCOE analysis works,

19   you can't actually decompose the whole into its

20   various constituent parts.

21   Q.   So you don't have a breakdown of

22   those component parts?

23   A.   No, and couldn't prepare one.

24   Q.   And do you recall we asked you for a

25   breakdown of the component costs of your own

 1   transmission project?

 2   A.   Yes.

 3   Q.   And you said you didn't have such a

 4   breakdown?

 5   A.   In terms of the dollar per megawatt

 6   hour charge, yes. That's right.

 7   Q.   Going on to a different subject.

 8   You're familiar with the testimony in this case

 9   from Dr. Proctor, right?

10   A.   Yes.

11   Q.   Is it fair to say he generally

12   contends that the wind from Iowa and MISO had a

13   lower cost than the delivered cost of wind energy

14   from your line?

15   A.   I'd say that's his general view, yes.

16   Q.   Would you agree that the areas around

17   northwest Iowa have some of the highest capacity

18   factor wind resources in the country?

19   A.   Some of the highest.

20   Q.   Would you agree that there is an

21   enormous untapped potential for wind development in

22   Iowa?

23   A.   I would say yes.

24   Q.   Would you agree that Iowa has the

25   potential to install over 318,000 megawatts of wind

 1   projects with gross capacity factors in excess of

 2   40 percent?

 3   A.   Are you referring to one of these

 4   charts here?

 5   Q.   No. I'm just asking if you'd agree

 6   with that.

 7   A.   I'm certain the number is very high.

 8   I don't know the exact number based on theoretical

 9   wind potential.

10   Q.   Does that sounds like the ballpark

11   number?

12   A.   I couldn't say. The number is very

13   large.

14   Q.   Mr. Berry, I'm going to hand you a

15   copy of your testimony from the Rock Island case in

16   Illinois and ask you if you would read in from

17   page 5 of that testimony, which was Exhibit 10.0 in

18   that case, the highlighted material, and if you'd

19   include this part here which is not highlighted.

20   A.   Just start here and end here

21   (indicating)?

22   Q.   Please.

23   A.   While wind generation has been more

24   extensively developed in Iowa with 4,524 megawatts

25   of capacity installed as of June 30th, 2012, an

 1   enormous untapped development potential remains in

 2   the state. According to NREL, Iowa has the

 3   potential to install over 318,000 megawatts of wind

 4   projects with gross capacity factors above

 5   40 percent.

 6   Q.   Thank you. On a related subject,

 7   you're not unfamiliar with the MISO MVP

 8   transmission projects, correct?

 9   A.   I am with familiar with those

10   projects.

11   Q.   They're designed to facilitate the

12   development of additional renewable energy,

13   correct?

14   A.   In part, yes.

15   Q.   In order to meet state RPS

16   requirements of MISO utilities, correct?

17   A.   In part, yes.

18   Q.   Those projects would also facilitate

19   the sale of more wind energy to the Missouri coops

20   and municipal systems in MISO, would they not?

21   A.   I do not.

22   Q.   Why would they not if they were

23   members of MISO?

24   A.   Well, with the transmission

25   expansion, it's not true that if you expand the

 1   grid in some areas it necessarily improves the

 2   ability of electricity to flow across all areas.

 3   **Q.   Do you recall that in the Rock Island**

 4   **case in Illinois you dismissed the relevance of**

 5   **those MVP projects because they would not enable to**

 6   **the delivery of power to the Chicago area?**

 7   A.   I don't think that's exactly what I

 8   said. I did say that they were of limited

 9   relevance to that proceeding.

10   **Q.   And you noted instead how the MISO**

11   **MVP projects would enable 41 million megawatt hours**

12   **of new renewable energy for meeting RPS goals in**

13   **the MISO footprint?**

14   A.   I do remember saying that, and it was

15   true at the time. I think a decent amount of that

16   41 million megawatt hours has actually been built

17   and is under way or operating since the time I

18   filed that testimony. Not all of it.

19   **Q.   I'd like to distribute a copy of**

20   **what's been marked as Exhibit 330, which is the**

21   **cover page and pages 58 to 60 of Mr. Berry's**

22   **rebuttal testimony in the Illinois Rock Island case**

23   **dated August 20th of 2014.**

24   **(MISSOURI LANDOWNERS ALLIANCE EXHIBIT**

25   **NO. 330 WAS MARKED FOR IDENTIFICATION BY THE**

 1 **REPORTER.)**

 2 BY MR. AGATHAN:

 3   **Q.   I may have misstated the date. It's**

 4 **dated August 20th, 2013.**

 5   A.   That's correct.

 6   **Q.   Do you have a copy of that exhibit**

 7 **before you?**

 8   A.   I do.

 9   **Q.   And does that consist of a cover page**

10 **and three pages of your testimony in that Illinois**

11 **case?**

12   A.   Right. Though I note that they're

13 only a portion of the overall testimony.

14   **Q.   Sure. Near the top of page 60, do**

15 **you discuss the purpose of and advantages to MISO**

16 **utilities of the MVP transmission projects?**

17   A.   Sorry. Could you repeat the

18 question?

19   **Q.   Sure. Near the top of page 60, do**

20 **you discuss the purpose and advantages to MISO**

21 **utilities of the MVP transmission projects?**

22   A.   Yes.

23   **Q.   Now if you turn to your direct**

24 **testimony in this case, page 30, line 12. Are you**

25 **there?**

 1   A.   I am.

 2   Q.   You predict there that if SPP and

 3   MISO wind energy is exported to PJM or other

 4   regions, more transmission projects will be needed

 5   in order to allow SPP and MISO states to meet their

 6   obligations; is that right?

 7   A.   Yes. And I'm discussing here that in

 8   many ways market for renewable energy is a regional

 9   market that goes beyond just one RTO.

10   Q.   Are you saying that the more

11   transmission projects could lead to higher costs?

12   A.   No, I'm not saying that here.

13   Q.   Do you recall what you said in the

14   Illinois Commerce Commission case about the

15   likelihood of wind energy actually being exported

16   from MISO to the PJM system?

17   A.   I don't recall my exact comments on

18   that.

19   Q.   Well, if you'd look, please, to

20   page 60, lines 1441 to 1445. Do you not say,

21   quote, attached as Rock Island Exhibit 10.25 is a

22   map of the MVP projects, paren, taken from the MISO

23   website cited in Dr. Gray's testimony, close paren,

24   which clearly demonstrates that the MISO MVP

25   projects do not provide for delivering additional

 1   **renewable energy to northern Illinois and the PJM**

 2   **grid, correct?**

 3   A.   Yes. That statement is correct.

 4   MR. AGATHAN: I'll offer Exhibit 330,

 5   your Honor.

 6   JUDGE BUSHMANN: Objections?

 7   MR. ZOBRIST: Judge, again, with the

 8   Bench's permission to supplement this exhibit with

 9   a full copy of Mr. Berry's rebuttal testimony, we

10   have no objection.

11   JUDGE BUSHMANN: That will be fine.

12   330 is received into the record.

13   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

14   NO. 330 WAS RECEIVED INTO EVIDENCE.)

15   BY MR. AGATHAN:

16   Q.   **A different issue. In order to**

17   **conduct their primary analyses in this case, both**

18   **Mr. Moland and Mr. Zavadil needed to know the**

19   **expected megawatt output from the Kansas wind**

20   **farms, right?**

21   A.   They need a wind profile, yes.

22   Q.   **In this case you supplied that wind**

23   **profile to both of them, did you not?**

24   A.   I did, though I collaborated with

25   both of them in developing it.

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 1         Q.      You provided the same data to both of

 2   them?

 3         A.      Yes.

 4         Q.      And this process began when you

 5   selected ten wind tower sites from an existing

 6   database sometimes referred to as the Eastern Wind

 7   Study Database?

 8         A.      Yes.

 9         Q.      And you selected those particular

10   towers, those ten towers because they were located

11   in the general vicinity of where the Kansas

12   converter station would be located?

13         A.      Yes.

14         Q.      How far, approximately, was each

15   tower, each of those ten towers from the proposed

16   site of the converter station?

17         A.      I don't know how far each of them

18   were.  I know overall they were close.

19         Q.      Close meaning approximately what?

20         A.      Certainly tens of miles.

21         Q.      And the data for the towers in this

22   database is maintained by a company named

23   AWS TruePower?

24         A.      Well, the data isn't really

25   maintained in that way.
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1   Q.   What part does AWS Truepower play in

2   this whole process of collecting and compiling the

3   data that you use today?

4   A.   AWS, which is one of the leading

5   meteorology firms in the country, they are the lead

6   meteorologist on preparing this data set. I

7   believe they run some of the computer models

8   necessary to prepare it in conjunction with the

9   National Renewable Energy Laboratory.

10   Q.   And what data does AWS Truepower

11   actually get from these ten towers that you talked

12   about?

13   A.   Well, they don't get data from the

14   towers.

15   Q.   Where do they get their data?

16   A.   Their data to prepare the site

17   profile estimates is based on a Mesoscale model.

18   It's based on underlying weather data from the

19   National Weather Service and other government

20   agencies. They apply a turbine technology, in this

21   case a somewhat outdated one, to come up with an

22   hourly profile of wind energy production.

23   Q.   So they get raw data and somehow

24   convert it into the data that they gave to you?

25   A.   They use raw data to calibrate a

1   weather simulation, and the outputs of that weather

2   simulation are wind speed data, which is then

3   converted into wind power production data.

4   Q.   In megawatts?

5   A.   Megawatt hours.

6   Q.   Megawatt hours. And that's the data

7   that was given to you, megawatt hour data?

8   A.   That was the data that I downloaded

9   and compiled to Mr. Zavadil and Mr. Cleveland and

10   reviewed with them.

11   Q.   Is it fair to say that data

12   accumulated over time at these met towers can be

13   converted in a number of different ways into a

14   single projected average wind speed?

15   A.   I'm sorry. Could you clarify what

16   you mean by these met towers?

17   Q.   The met towers which you used in your

18   analysis, the ten met towers that you asked for

19   data from AWS Truepower.

20   A.   Well, as I explained, it's not

21   actually how the estimate was prepared. So it's

22   not simply based on ten met tower locations. It's

23   a more in-depth model than that.

24   Q.   Mr. Berry, I'm going to show you

25   again a set of data requests that we sent to you

 1   **and responses, and I wonder if you could read into**

 2   **the record Item 2 and your response to Item 2?**

 3   A.   Data accumulated over time at several

 4   meteorological towers on a prospective wind farm

 5   can be converted in a number of different ways into

 6   a single projected average wind speed at that wind

 7   farm.

 8   Response. The company admits that

 9   data accumulated over time at several

10   meteorological towers on a prospective wind farm

11   can be converted in a number of different ways into

12   a single projected average wind speed at that farm.

13   Q.   **Thank you. We asked for a copy of**

14   **the data that AWS Truepower provided to you for one**

15   **of the ten towers that you asked for data from,**

16   **right?**

17   A.   Again, these are not AWS Truepower

18   met towers. Are you referring to one of the sites

19   in my compiled profile?

20   Q.   **Yes.**

21   A.   Yes, you did.

22   Q.   **I apologize for the incorrect**

23   **terminology.**

24   A.   No problem.

25   Q.   **I'd like to distribute a copy of**

 1   what's been marked as Exhibit 331, which consists

 2   of a two-page document with four columns of

 3   numerical data on both pages, and it has a notation

 4   at the top of page 1 which says Site No. 00100.

 5   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

 6   NO. 331 WAS MARKED FOR IDENTIFICATION BY THE

 7   REPORTER.)

 8   BY MR. AGATHAN:

 9   Q.   Do you have a copy of that in front

10   of you?

11   A.   I do.

12   Q.   Is that a copy of the first and last

13   pages of the data which was provided to you for one

14   of those towers?

15   A.   I believe so. Again, it wasn't -- it

16   would have been downloaded as a large spreadsheet

17   rather than a number of pages. But it appears from

18   the dates here that it would be the beginning and

19   the end of the time series.

20   Q.   And the full package would have

21   consisted of like 150,000 rows of data, would it

22   not?

23   A.   I don't know the number, but a great

24   number.

25   Q.   Consisting of thousands of pages if

 1 we printed it out on 8 and a half by 11 paper?

 2   A.   I'm sure it would be long.

 3   Q.   Could you describe for us what the

 4 data in each of the four columns represents?

 5   A.   Sure. The column date is the day.

 6 Time is the time in standard time. The speed at

 7 80 meters is the estimated wind speed at 80 meters

 8 across the wind farm. The net power is the power

 9 on megawatts by applying a turbine and power curve,

10 adjusting the gross power output there for losses,

11 and arriving at a net power output.

12   Q.   In the second column time, what are

13 the time increments there?

14   A.   They appear to be ten minutes.

15   Q.   So you'd have ten minutes for every

16 hour, every day for each of the ten towers?

17   A.   For each of the ten sites, you'd have

18 ten-minute wind data, that's right. Excuse me.

19 Ten-minute production data.

20   Q.   And data comparable to this would

21 have been provided to you for each of the ten

22 towers?

23   A.   Yes. And again, to clarify, I just

24 downloaded it from a publicly available website.

25 It wasn't specifically provided to us by AWS.

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1   Q.   Then you basically just added up the

2 data of the type shown on Exhibit 331 and provided

3 that to Mr. Moland?

4   A.   Yeah. We condensed it to an hourly

5 profile and then combined the sites into a single

6 figure. Single figure each hour I should say.

7   MR. AGATHAN: I'd offer Exhibit 331,

8 your Honor.

9   JUDGE BUSHMANN: Any objections?

10   MR. ZOBRIST: No objection.

11   JUDGE BUSHMANN: It will be received

12 into the record.

13   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

14 NO. 331 WAS RECEIVED INTO EVIDENCE.)

15   MR. AGATHAN: We'll distribute now a

16 copy of a document which has been marked as

17 Exhibit 332, which purports to be a copy of some of

18 your answers to data requests which were submitted

19 to you.

20   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

21 NO. 332 WAS MARKED FOR IDENTIFICATION BY THE

22 REPORTER.)

23 BY MR. AGATHAN:

24   Q.   Do you have a copy of that document?

25   A.   I do.

 1   Q.   Does that exhibit show some questions

 2   we submitted to you and your response to certain

 3   data requests?

 4   A.   Yes, though I'll note it does appear

 5   to just be some of the questions in this data set.

 6   Q.   Certainly. Do questions and answers

 7   49 through 53 generally address the process by

 8   which you requested and received the information on

 9   the ten towers we've been talking about?

10   A.   Yes.

11   MR. AGATHAN: I'll offer Exhibit 332,

12   your Honor.

13   MR. ZOBRIST: No objection.

14   JUDGE BUSHMANN: It will be received.

15   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

16   NO. 332 WAS RECEIVED INTO EVIDENCE.)

17   THE WITNESS: I'm sorry. Just on the

18   numbering of that exhibit, I had 332 here.

19   MR. AGATHAN: 332, yes. Right. 332.

20   Did I offer 332, your Honor?

21   JUDGE BUSHMANN: I thought you did,

22   but I could have been mistaken of what I heard. I

23   was expecting it.

24   THE WITNESS: My apologies if I

25   misheard.

 1   BY MR. AGATHAN:

 2   Q.   On a different subject, does Clean

 3   Line or Grain Belt plan to establish any kind of

 4   decommissioning fund to remove the project

 5   facilities from the right of way if and when the

 6   line is no longer being used to transmit

 7   electricity?

 8   A.   We have no plans to do so.

 9   Q.   When Clean Line issues bonds or

10   similar forms of long-term debt, will you include a

11   sinking fund provision in those bond indentures?

12   A.   I don't know.

13   Q.   You don't have any definite plans to

14   do so?

15   A.   Actually, I don't know what a sinking

16   fund is.

17   Q.   Do you recall that we asked you in

18   discovery if you're aware of any reason why a large

19   retail electric customer in Missouri would not be

20   permitted to purchase capacity on your line?

21   A.   I do seem to recall that.

22   Q.   Do you recall telling us you're not

23   aware of any reason why this would not be possible?

24   A.   I do.

25   Q.   Do you also recall that we asked you

 1 **about whether Grain Belt plans to seek approval of**

 2 **this Commission before issuing any form of debt**

 3 **obligation?**

 4   A.   I do.

 5   **Q.   And I realize you weren't giving a**

 6 **legal opinion, but is it fair to say you questioned**

 7 **whether or not you would need to seek approval of**

 8 **this Commission before issuing debt obligations?**

 9   A.   I have not researched it or have an

10 opinion one way or the other. If an approval is

11 required, we would definitely obtain it.

12   **Q.   But you don't know at this point**

13 **whether in your mind an approval is required?**

14   MR. ZOBRIST: Objection. Calls for a

15 legal conclusion.

16   JUDGE BUSHMANN: Sustained.

17   MR. ZOBRIST: Judge, Mr. Agathan has

18 kindly showed me a section of a DR, and it appears

19 to contain an opinion on the law. If there's

20 something in the DR response that doesn't pertain

21 to a legal question, I don't have a problem, but if

22 it cites Missouri statutes and things of that

23 nature, I object to his use of that unless he makes

24 an offer that indicates it's not going to ask for a

25 legal conclusion.

 1   JUDGE BUSHMANN: What's the purpose

 2   for which you're presenting that for the witness?

 3   MR. AGATHAN: It's my opinion, your

 4   Honor, that the answer clearly implies that Grain

 5   Belt may not have to seek approval from the

 6   Commission. If that's the case, I think we would

 7   argue that one of the conditions that ought to be

 8   attached if the certificate is issued is that they

 9   do, in fact, need to come back to the Commission

10   for approval.

11   JUDGE BUSHMANN: It doesn't sound

12   like you're offering this for purposes of

13   impeachment. It sounds like it would be an

14   improper legal opinion. I'm going to sustain the

15   objection.

16   MR. AGATHAN: I take it the same

17   ruling would apply to the witness' opinion

18   regarding the sale of assets?

19   MR. ZOBRIST: I will make the same

20   objections.

21   JUDGE BUSHMANN: And I would make the

22   same ruling.

23   MR. AGATHAN: Skip that part then.

24   BY MR. AGATHAN:

25   Q.   **Is it true that utilities in load**

 1   zones outside Missouri might need to perform

 2   additional deliverability studies or obtain

 3   additional transmission rights in order to use

 4   energy from the Grain Belt line to meet capacity

 5   needs?

 6   A.   Yes.

 7   Q.   Would that same logic apply to

 8   Missouri's which are outside the MISO footprint but

 9   are in Missouri?

10   A.   I'm sorry. You said Missouri's. Did

11   you mean Missouri utilities?

12   Q.   Would the same logic apply to

13   Missouri utilities, Missouri load-serving utilities

14   which are located outside the MISO footprint?

15   A.   Yes, they could need to seek one of

16   those things to count the delivered wind as a

17   capacity resource.

18   Q.   To your knowledge, has Grain Belt

19   made a presentation to either Kansas City and

20   Power & Light or the Empire District about buying

21   capacity on your line?

22   A.   I don't know.

23   Q.   How about Missouri municipal or coop

24   systems outside the MISO area?

25   A.   I think it's likely we have. I don't

1   have specific recollection of the meeting.

2   Q.   **So you don't know?**

3   A.   I don't know.

4   Q.   **Is it fair to say that regardless of**

5   **the capacity value ascribed to wind generation, it**

6   **primarily provides energy and not capacity?**

7   A.   I'd say its primary value is in low-

8   cost clean energy. There is an additional value as

9   a capacity resource, but it's typically smaller

10 than the energy value.

11   Q.   **So is it fair to say that regardless**

12 **of the capacity value ascribed to wind generation,**

13 **it primarily provides energy in that capacity?**

14   A.   I think I answered the question.

15   Q.   **Pardon?**

16   A.   Is that the same question?

17   Q.   **Yes.**

18   A.   I believe I answered it.

19   Q.   **Well, I'm not sure I got the answer.**

20 **Would you agree or disagree with that statement?**

21   MR. ZOBRIST: Judge, I think he did

22 ask. So I object, asked and answered.

23   JUDGE BUSHMANN: Sustained.

24 BY MR. AGATHAN:

25   Q.   **Mr. Berry, I'm going to show you a**

 1   copy of a document which is entitled Comments of

 2   Grain Belt Express Clean Line, LLC on Union

 3   Electric Company's Integrated Resource Plan, which

 4   was filed with this Commission in Docket

 5   No. EO-2011-0271.

 6   And directing your attention to

 7   page 3, do the comments there say, quote, it is

 8   universally known that wind is a very variable

 9   resource. Regardless of the capacity value

10   ascribed to wind generation, Ameren attributes

11   8 percent in its filing. Wind primarily involves

12   energy, not capacity. Is that what your comments

13   state?

14   A.   I don't recall these exact comments,

15   but you did read it correctly.

16   Q.   And that was filed on behalf of Grain

17   Belt Express, was it not, or Clean Line?

18   A.   It appears to be.

19   Q.   Is it fair to say that renewable

20   compliance costs which are incurred by utilities,

21   such as energy purchased from Kansas wind farms,

22   must be passed through to end-use customers through

23   retail rates?

24   A.   I'd say that's generally true.

25   Q.   Is it your position that as a

 1   merchant transmission project, your investors are

 2   incurring all the financial risks of the project?

 3   A.   Our investors in the company, yes.

 4   Q.   And one such risk is that the

 5   Commission doesn't approve your application to

 6   build the line in Missouri, right?

 7   A.   That is a risk.

 8   Q.   And if you're not permitted to build

 9   the line, that's just one of the many risks which

10   investors knowingly assumed all along; is that

11   correct?

12   A.   Yes.

13   Q.   You recall we asked you for any

14   studies you had conducted which addressed how your

15   project satisfies the least-cost planning

16   requirements of the Commission's rules?

17   A.   I do recall that.

18   Q.   And your answer was that you had no

19   such studies?

20   A.   I don't -- I know we don't have any

21   studies that are specifically on that topic. We

22   may have some studies that are relevant.

23   Q.   But you said you had no such studies,

24   didn't you?

25   A.   Could you point me to which data

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 1   request you're referring to?

 2        Q.    Mr. Berry, I'm going to hand you a

 3   copy of some of the data requests and your

 4   responses again.  Ask you to read into the record,

 5   please, Item 33 and your response.

 6        A.    Would you like me to read the request

 7   as well?

 8        Q.    Yes, please.

 9        A.    Request 33:  Please provide copies of

10   all studies and analyses done by or for Grain Belt

11   or Clean Line which address how the project

12   satisfies the least-cost planning requirements of

13   Missouri PSC Rule 4 CSR 240-22.

14             Response:  There are no such studies

15   or analyses since the requirements of 4 CSR 240-22

16   do not apply to either Grain Belt Express or Clean

17   Line Energy.  See Section 22 dash -- strike that --

18   22.080(1) which indicates that the rule is only

19   applicable to the four vertically integrated,

20   rate-regulated electric utilities that serve retail

21   customers in Missouri.

22        Q.    Thank you.  Did you look at the cost

23   of RECs as an alternative for Missouri utilities to

24   purchasing Kansas wind from your line?

25        A.    Not the standalone purchase of RECs.
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 1   Q.   Did you look at the impact of the

 2   rate cap on the need to import the Kansas wind rate

 3   cap in Missouri?

 4   A.   I'd say indirectly, yes, we did

 5   address that.

 6   Q.   Mr. Berry, I'm going to hand you

 7   another -- or I guess the same set of data requests

 8   that we've been talking about and ask you if you

 9   would read into the record, please, Item 11 and

10   your response.

11   A.   In your calculation at Schedule DAB-1

12   showing that Missouri investor-owned utilities will

13   need to purchase approximately 9 million megawatt

14   hours of renewable energy in 2021, how, if at all,

15   did you factor in the limitation of the 1 percent

16   rate cap which you mention at page 11, lines 20

17   through 21 of your direct testimony?

18   Response: The calculations behind

19   Schedule DAB-1 did not include an analysis of rate

20   impact of meeting the 2021 renewable energy

21   standard (RES) demand. The calculation's purpose

22   was to determine the future demand based on the

23   Missouri RES forecasted future electricity demand.

24   Q.   Thank you.

25   On a different subject, you're very

 1 familiar, I assume, with a production tax credit

 2 for wind generation?

 3   A.   I am familiar, yes.

 4   Q.   Is it fair to say that there's some

 5 question at this point whether or not the

 6 production tax credit will be extended?

 7   A.   Yes.

 8   Q.   Assuming it is extended in the same

 9 general form as in past year, and assuming the line

10 is built, the Grain Belt line is built, did you

11 provide us with your best estimate of the amount of

12 the tax credits to which the wind farms connecting

13 to your line could be entitled?

14   A.   I did.

15   Q.   I'd like to distribute now a copy of

16 Exhibit 333.

17   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

18 NO. 333 WAS MARKED FOR IDENTIFICATION BY THE

19 REPORTER.)

20 BY MR. AGATHAN:

21   Q.   Could you explain what's represented

22 on Exhibit 333?

23   A.   This is a ten-year model of the

24 production tax credits to which the owners of wind

25 generation in Kansas connected to our project could

 1 be entitled to use to offset other income taxes

 2 that their owners would owe.

 3   Q.   And in nominal dollars, are the

 4 production tax credits listed on the farthest-most

 5 right column?

 6   A.   They are.

 7   Q.   And then the present value of that

 8 stream of dollars is the figure you have

 9 represented there of 3.246 billion?

10   A.   Yes.

11   Q.   If my math is right, do the figures

12 in the far right column add up to approximately

13 4.9 million? Does that sound right?

14   A.   I'll accept that subject to check.

15   MR. AGATHAN: I'll offer Exhibit 333,

16 Judge.

17   JUDGE BUSHMANN: Any objections?

18   MR. ZOBRIST: No objection.

19   JUDGE BUSHMANN: Exhibit 333 is

20 received into the record.

21   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

22 NO. 333 WAS RECEIVED INTO EVIDENCE.)

23   MR. AGATHAN: Your Honor, just so we

24 could gage the impact of these tax credits on

25 Missouri ratepayers, I'd ask that the Commission

 1   take administrative notice of the U.S. Census

 2   official data from the year 2010 of the total U.S.

 3   population in the country and the population of

 4   Missouri.

 5   MR. ZOBRIST: Well, the premise of

 6   the question I object to. That is argumentative.

 7   There's no basis for that. If there's some

 8   relevance to the population of Missouri, all things

 9   being equal, I don't have an objection to that.

10   There's no foundation for the premise

11   of the request for administrative or official

12   notice, so I object to that.

13   MR. AGATHAN: I'm simply asking --

14   JUDGE BUSHMANN: On the grounds of

15   relevance?

16   MR. ZOBRIST: Well, yeah. We don't

17   have a tax expert up here or -- and if he's got an

18   opinion on the effect of this upon a taxpayer, then

19   Mr. Agathan ought to ask that. I don't have a

20   problem with whatever the population of Missouri is

21   in isolation coming into evidence.

22   JUDGE BUSHMANN: What's the relevance

23   of that piece of information?

24   MR. AGATHAN: Well, assuming that my

25   numbers are right, for example, the population in

 1   Missouri is 1.9 percent of the total. So this

 2   would allow us to say that of the 4.9 billion or

 3   3.2 billion, 1.9 percent of that would come from

 4   Missouri taxpayers.

 5   MR. ZOBRIST: And that's the point.

 6   There's no evidence that this, quote, unquote,

 7   comes from or is paid by Missouri taxpayers. In

 8   fact, there's been evidence to the contrary in the

 9   hearing. So I object to that portion. And

10   therefore, I find a lack of relevance to the entire

11   request.

12   JUDGE BUSHMANN: Your response,

13   Mr. Agathan?

14   MR. AGATHAN: Yes. This money has to

15   come from somewhere, obviously. If the population

16   of Missouri is 1.9 percent of the country's total,

17   then presumably 1.9 percent of the tax credits are

18   going to come from Missouri taxpayers.

19   JUDGE BUSHMANN: I think you're

20   making some leaps of assumption in there that I'm

21   not sure are warranted.

22   MR. AGATHAN: Okay. Let me put it

23   this way, Judge. I would just ask that you take

24   administrative notice of the population of Missouri

25   and the population of the country as a whole, and

 1   we can argue in briefs or whatever how --

 2   JUDGE BUSHMANN: You can argue what

 3   that means later. If you have a document of some

 4   sort that has that information, then I can take

 5   administrative notice of that, but I'm not going to

 6   take administrative notice of something I don't

 7   have in front of me. So if you want to provide

 8   that at a later time, I can consider that.

 9   MR. AGATHAN: May I approach, Judge?

10   JUDGE BUSHMANN: You may.

11   MR. AGATHAN: This is a document

12   showing official census data saying that the 2010

13   census reported for the population in the country

14   as a whole is 308.7 million people, and for

15   Missouri 5,988,927. Those are figures that I would

16   ask that the Commission take administrative notice

17   of.

18   JUDGE BUSHMANN: What's your source

19   of this information?

20   MR. AGATHAN: U.S. Census data from

21   their website.

22   JUDGE BUSHMANN: Do you want to make

23   any comment about this?

24   MR. ZOBRIST: Well, Judge, I think

25   since we have a limited amount of time today and

1   witnesses from out town, this is probably something

2   that perhaps Mr. Agathan and I can meet later and

3   maybe we can have an agreement as to what that

4   figure is. But I'm really not prepared to look at

5   his multi-page document and agree to anything right

6   now.

7   JUDGE BUSHMANN: Why don't I withhold

8   a ruling on that. See if you can work something

9   out on that. I don't think in concept I have a

10   problem with taking administrative notice of those

11   two numbers. As to the meaning of them, the

12   parties can argue about whether that's important

13   later and see if you can come up with a number that

14   you're willing to agree to.

15   MR. AGATHAN: I would simply ask

16   Mr. Zobrist if he's got some numbers that he would

17   like to submit instead of these, that he bring

18   those to our attention.

19   MR. ZOBRIST: Judge, I just found out

20   about this like three minutes ago.

21   MR. AGATHAN: I'm not saying now.

22   MR. ZOBRIST: I'll be glad to take a

23   look at it.

24   JUDGE BUSHMANN: We'll be convening

25   another session in a week, so possibly by then

 1   you'll be able to reach an agreement.

 2   MR. AGATHAN: Thank you.

 3   MR. ZOBRIST: Thank you, Judge.

 4   BY MR. AGATHAN:

 5   **Q.   I have some questions now about your**

 6   **surrebuttal testimony, Mr. Berry.   First directing**

 7   **your attention to page 49 of your surrebuttal,**

 8   **beginning at line 10.   Are you there?**

 9   A.   I am.

10   **Q.   You state that if the cost of the**

11   **project is higher than expected, that is not a risk**

12   **that Missouri consumers will bear; is that correct?**

13   A.   That's absolutely correct.

14   **Q.   It's true that if the project goes**

15   **forward, you're going to need to recover all your**

16   **costs, correct?**

17   A.   We certainly would have that goal.

18   We do not have any such guarantee.

19   **Q.   But ultimately all of your costs have**

20   **to be borne by retail ratepayers, do they not?**

21   A.   I wouldn't agree with that.

22   **Q.   Who else would bear those costs other**

23   **than retail ratepayers?**

24   A.   As mentioned, we could sell capacity

25   to wind generators.   We could sell capacity to a

 1   utility who recovers their costs from cost of

 2   service rates, in which case your statement would

 3   be true.

 4   Q.   **And if you sell to a wind**

 5   **generator --**

 6   A.   I wasn't actually finished with my

 7   answer.

 8   Q.   **Excuse me.**

 9   A.   So I don't agree, and both us, we're

10   taking risk in terms of recovering our cost, and a

11   wind generator that was an independent power

12   producer would be taking risk in terms of

13   recovering their costs. And if one of those risks

14   were to obtain, neither of us has any guarantee of

15   recovering costs from retail ratepayers.

16   Q.   **If you sell capacity to a wind**

17   **generator, they presumably sell energy to the**

18   **load-serving utility, right?**

19   A.   Yes. Or to the MISO or PJM market,

20   yes.

21   Q.   **And presumably they include in their**

22   **cost of energy the cost of the capacity that**

23   **they're buying from you?**

24   A.   They certainly intend to recover the

25   cost of that capacity. But my point is, is that

1   they and us would be taking the risk that they

2   cannot if things don't work out as intended.

3   Q.   And if they do not recover their

4   costs, what happens to them?

5   A.   It's a loss to investors.

6   Q.   And essentially if they can't recover

7   all their costs, they go out of business?

8   A.   Not necessarily.

9   Q.   How do they stay in business if they

10 can't recover their costs?

11   A.   Well, just as an example, if an

12 equity investor in a wind farm invested

13 $500 million in that wind farm and because the

14 capacity factor was lousy they were only able to

15 recover $250 million of that equity investment, by

16 no means does it mean that wind farm is going out

17 of business. What it means is they're not making

18 the money they intended.

19   Q.   And not recovering their costs?

20   A.   Correct. But that does not mean that

21 the wind farm would go out of business.

22   Q.   The last paragraph at page 53 of your

23 surrebuttal, you talk about your agreement not to

24 recover the costs of the feeder lines in western

25 Kansas; is that correct?

 1   A.   Yes, it is.

 2   Q.   **You're just saying that you won't**

 3 **seek to recover those costs through a cost**

 4 **allocation process; is that correct?**

 5   A.   Yes, that's correct.

 6   Q.   **At page 70, lines 8 to 14, you**

 7 **discuss the reasons why you should not be required**

 8 **to provide any financial security such as a trust**

 9 **fund to pay for the eventual removal of the project**

10 **facilities from the Missouri right of way; is that**

11 **essentially correct?**

12   A.   Could you repeat your question?

13   Q.   **Sure.**

14   MR. ZOBRIST: Could you give us the

15 page, please? I've forgotten it.

16   MR. AGATHAN: Page 70, lines 8 to 14.

17   MR. ZOBRIST: Thank you.

18 BY MR. AGATHAN:

19   Q.   **Do you have it?**

20   A.   I'm there. If you could repeat the

21 question, please.

22   Q.   **Sure. You essentially discuss the**

23 **reasons why you should not be required to provide**

24 **any financial security such as a trust fund to pay**

25 **for the eventual removal of the project facilities**

 1   from the Missouri right of way; is that essentially

 2   correct?

 3   A.   That's correct.

 4   Q.   And you say that you know of no

 5   transmission line over the last hundred years which

 6   has been constructed and then abandoned, correct?

 7   A.   That's correct.

 8   Q.   How many of those lines over the past

 9   hundred years were built in this country by

10   merchant companies, such as Clean Line, as opposed

11   to traditional rate regulated utilities?

12   A.   Certainly most were by traditional

13   rate regulated utilities.

14   Q.   How many over the past hundred years

15   have been built by merchant companies such as Grain

16   Belt?

17   A.   I don't know the exact number.

18   Q.   Directing your attention now to

19   page 15, lines 15 to 18. You mention that Ameren

20   Missouri's recent IRP called for the purchase of

21   400 megawatts of wind power; is that correct?

22   A.   Yes, it is.

23   Q.   I have some additional questions

24   about that document submitted by Ameren, and we're

25   distributing what's been marked as Exhibit 334,

 1   which consists of the cover page and 18 additional

 2   pages from Ameren's 2014 Integrated Resource Plan.

 3   (MISSOURI LANDOWNER ALLIANCE EXHIBIT

 4   NO. 334 WAS MARKED FOR IDENTIFICATION BY THE

 5   REPORTER.)

 6   BY MR. AGATHAN:

 7   Q.   Do you have a copy of the document

 8   marked as Exhibit 334?

 9   A.   I do.

10   Q.   Does it appear to consist of pages

11   from the same document which you quoted from in

12   your surrebuttal testimony at pages -- at page 15,

13   lines 15 to 18?

14   A.   Yes.

15   Q.   At page 5 of the document, page 5

16   being marked in the bottom right-hand corner,

17   Ameren states that they do -- that they expect to

18   retire their Sioux Energy Center by the end of

19   2033, correct?

20   A.   Correct.

21   Q.   And upon the retirement of Sioux,

22   they expect to need to add new generating capacity

23   to meet customer demand and MISO reserve

24   requirements for reliability, correct?

25   A.   Correct.

 1   Q.   So it would be 19 years from now that

 2   they would need that additional capacity?

 3   A.   I don't think you can draw the

 4   conclusion from this that that's the first time

 5   they would need new capacity.

 6   Q.   Have you seen any other indication

 7   that they'll need capacity earlier than that?

 8   A.   Well, again, this is a section of --

 9   only a selection from the IRP, but I do recall that

10   there were plans to add new generation before then.

11   Q.   New generation of what type?

12   A.   I know the 400 megawatts of wind. I

13   seem to recall there was some other generators as

14   well.

15   Q.   But they could be adding

16   400 megawatts of wind in order to meet their quota

17   in Missouri as opposed to needing capacity; is that

18   not correct?

19   A.   It's possible, yes.

20   Q.   Then page 7 has a bar chart which

21   shows the levelized cost of energy for resource

22   options; is that correct?

23   A.   Yes.

24   Q.   And the lowest cost is energy

25   efficiency?

```
 1        A.    According to this analysis, yes.

 2        Q.    Followed by existing coal?

 3        A.    Correct.

 4        Q.    And then regional wind?

 5        A.    Correct.

 6        Q.    Then small hydro?

 7        A.    Correct.

 8        Q.    And then Missouri wind, correct?

 9        A.    Correct.

10        Q.    And these figures are without tax

11   credits; is that correct?

12        A.    They appear to be.

13        Q.    And on page 13, the next page in the

14   document, there's a pie chart showing generation

15   investments, correct?

16        A.    Yes.

17        Q.    And does that show that Ameren is

18   planning between years 2015 and 2024 to add a

19   billion in renewables?

20        A.    Yes.

21        Q.    Then turning over to page 7 of

22   chapter 2, I notice the pages don't run totally

23   consecutively.  They are pages of different

24   chapters.  But do you see page 7 of chapter 2,

25   planning environment?
```

 1   A.   I do.

 2   Q.   In the paragraph -- second to the

 3   last paragraph, I guess, they indicate that MISO's

 4   value for wind capacity credit based on the 2013

 5   Resource Adequacy Report is 14.1 percent, correct?

 6   A.   I think that's an incomplete

 7   characterization of the way MISO does this, but

 8   this is what the report says, yes.

 9   Q.   This is Ameren's position?

10   A.   Well, it's their simple summary of

11   it, yes.

12   JUDGE BUSHMANN: Mr. Agathan, could I

13   get you to use the microphone?

14   MR. AGATHAN: Sorry, Judge.

15   BY MR. AGATHAN:

16   Q.   And the bar chart right above that

17   that shows the reserve planning margins required

18   for Ameren?

19   A.   I believe this is actually the

20   system-wide reserve margin.

21   Q.   In any event, for the year 2019 that

22   figure is 15.6 percent, right?

23   A.   That's the projected figure, yes.

24   Q.   And then going over to page 26 of

25   chapter 6, new supply side resources, that page and

 1   the next several pages talk about the potential

 2   sites identified by Ameren for wind generation; is

 3   that correct?

 4   A.   Yes.

 5   Q.   And then looking at page 29 of

 6   chapter 6, in the main full paragraph starting

 7   about four lines down, you see where it starts out

 8   regional wind? Page 29 of chapter 6.

 9   A.   Okay. I'm there.

10   Q.   Do you see where it -- the sentence

11   starts out regional wind?

12   A.   Okay.

13   Q.   It says, Regional wind cost and

14   performance characteristics are based on the

15   average 80-meter results for Iowa, Illinois,

16   Minnesota and South Dakota, i.e. priority

17   development areas 1, 2, 3, 11, 18 and 19, and were

18   selected based on deliverability to MISO, expected

19   cost performance and relative geographic proximity,

20   correct?

21   A.   That's what it says.

22   Q.   It also says, Approximately 500

23   megawatts of Missouri wind is assumed to be

24   available for RES compliance, and additional wind

25   for RES compliance or other resource needs could be

1   supplied by regional wind, correct?

2   A.   That's what it says.

3   Q.   Turning to page 34 of the report

4   under chapter 6, do you see that?

5   A.   Yes.

6   Q.   Down at the very bottom of the page

7   it says, quote, it is important to note that

8   levelized cost of energy figures while used for a

9   convenient comparisons of resource alternatives do

10   not fully capture all the relative strengths and

11   challenges of each resource type.

12   For example, wind resources are

13   intermittent resources and therefore cannot be

14   counted on for meeting peak demand requirements in

15   the same way a nuclear or gas-fired resource can.

16   Similarly, using an energy cost measure to evaluate

17   peaking resources such as simple cycle CTGs does

18   not fully reflect the value as a capacity resource.

19   The levelized cost of wind resources

20   present in Figure 6.9 also does not reflect the

21   full cost of transmission infrastructure needed to

22   integrate wind and other intermittent resources

23   into the electric grid, correct?

24   A.   That's what it says.

25   Q.   If you turn over to page 7 of

 1   chapter 9, you see the data at the top under

 2   Table 9.2?

 3   A.   I do.

 4   Q.   And one of the columns says tenure

 5   sum term 1 for the years 2015 to 2024; is that

 6   correct?

 7   A.   Yes.

 8   Q.   And it shows that the megawatts

 9   installed of new wind will be 100; is that correct?

10   A.   Well, there are multiple rows here.

11   One of them says 100.

12   Q.   And in that same row, the ten-year

13   term sum term 2 for the years 2025 to 2034 includes

14   142 megawatts of wind being installed, correct?

15   A.   I actually -- I mean, I don't know

16   the context of this table and don't fully

17   understand it. I can tell you the number 142

18   appears on this page, but I'm having trouble

19   determining exactly what it means.

20   Q.   Well, this shows -- if you'll look

21   about three lines above that, it shows the RS

22   requirements within the 1 percent rate cap limit,

23   correct?

24   A.   That's the title of it, yes.

25   MR. AGATHAN: I'll offer Exhibit 334,

 1 your Honor.

 2   JUDGE BUSHMANN: Any objections?

 3   MR. ZOBRIST: Well, I -- this is

 4 particularly confusing because we seem to have like

 5 three page 7s in here. But with the stipulation

 6 that one of us will offer the entire report so it

 7 can be put into context, I don't have an objection.

 8   JUDGE BUSHMANN: I think that will be

 9 a good idea. Exhibit 334 is received into the

10 record.

11   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

12 NO. 334 WAS RECEIVED INTO EVIDENCE.)

13   JUDGE BUSHMANN: Mr. Agathan, do you

14 have a lot more questions? I'm trying to figure

15 this out so I can time our break.

16   MR. AGATHAN: Half an hour.

17   JUDGE BUSHMANN: Let's take a

18 15-minute break. We'll be in recess until

19 3 o'clock.

20   (A BREAK WAS TAKEN.)

21   JUDGE BUSHMANN: We're back on the

22 record. Mr. Agathan, you can continue your

23 questioning.

24   MR. AGATHAN: Thank you, Judge.

25 BY MR. AGATHAN:

 1   Q.   Mr. Berry, I have just one other

 2   question that I wanted to ask you on Exhibit 334,

 3   the Ameren plan.

 4   A.   Okay.

 5   Q.   The last page of that exhibit is

 6   marked page 7 of chapter 9; is that correct?

 7   A.   Yes.

 8   Q.   You see the chart down on the bottom?

 9   A.   Yes.

10   Q.   Four lines up from the bottom, if you

11   look off to the far right total, it says

12   400 megawatts there, correct?

13   A.   That's right.

14   Q.   Is that where you derived your

15   400 megawatt figure that you said Ameren will be

16   planning on adding?

17   A.   No, it's actually not.

18   Q.   Do you know where you got your

19   400 megawatt figure?

20   A.   Well, it's on the summary page of

21   their preferred plan.

22   Q.   Is that the same 400 megawatts that

23   are shown here?

24   A.   It may be. It's hard to know. It

25   looks like Table 9.3 is examining different

 1   portfolios. So I'd have to look at the whole

 2   document to be sure.

 3   **Q.   I'd like to distribute now what's**

 4   **been marked as Exhibit 339. It's a four-page**

 5   **document titled description of the Meso, M-e-s-o,**

 6   **map system.**

 7   **(MISSOURI LANDOWNERS ALLIANCE EXHIBIT**

 8   **NO. 339 WAS MARKED FOR IDENTIFICATION BY THE**

 9   **REPORTER.)**

10   BY MR. AGATHAN:

11   **Q.   Do you have a copy of that in front**

12   **of you?**

13   A.   I do.

14   **Q.   Is that a document which you provided**

15   **to us in discovery recently?**

16   A.   It is.

17   **Q.   And could you generally describe what**

18   **that document is?**

19   A.   It's describing the Mesoscale

20   modeling which is involved in the wind profiles we

21   were discussing earlier today.

22   **Q.   Would that describe, for example, how**

23   **a color-coded wind map which appears as your**

24   **Schedule DAB-2 was compiled?**

25   A.   It is certainly relevant to that. It

 1   describes some of the techniques to coming up with

 2   that map.

 3   MR. AGATHAN: I'd offer Exhibit 339

 4   into evidence, your Honor.

 5   JUDGE BUSHMANN: Any objections?

 6   MR. ZOBRIST: No objection.

 7   JUDGE BUSHMANN: 339 is received in

 8   the record.

 9   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

10   NO. 339 WAS RECEIVED INTO EVIDENCE.)

11   MR. AGATHAN: I'd like to also

12   distribute what's been marked as Exhibit 335 at

13   this time.

14   JUDGE BUSHMANN: Your exhibit list

15   indicates that's highly confidential.

16   MR. AGATHAN: I apologize. I'm not

17   going to distribute it. This is the one document

18   that you told us you excused us from making copies

19   for everybody and we're just going to give it to

20   the court reporter.

21   JUDGE BUSHMANN: Okay. So no

22   questions about it?

23   MR. AGATHAN: No. I should hand it

24   to the witness first just for identification.

25

 1   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

 2   NO. 335 WAS MARKED FOR IDENTIFICATION.)

 3   BY MR. AGATHAN:

 4   Q.   Do you have a copy of that exhibit,

 5   Mr. Berry, of 335?

 6   A.   I do.

 7   Q.   And not counting the letter of

 8   transmittal from Grain Belt's attorney, roughly how

 9   many pages are there?

10   A.   261.

11   Q.   Does that consist of the material

12   which you gave to us in discovery when we asked you

13   for responses from the wind developers to your RFI?

14   A.   Certainly most of the material, yes.

15   Q.   And some of the material on

16   Exhibit 335 was redacted by someone at Grain

17   Belt --

18   A.   Yes.

19   Q.   -- before it was given to me?

20   A.   Correct.

21   Q.   And what was not redacted is the

22   material on the exhibit which consists of responses

23   provided by the wind developers to Grain Belt; is

24   that correct?

25   A.   Correct.

 1   MR. AGATHAN: I'd offer Exhibit 335

 2   in evidence, your Honor.

 3   MR. ZOBRIST: Your Honor, since I

 4   haven't had an opportunity to look at that, I'd

 5   like to request an opportunity to do so and either

 6   advise you at the end of the day or when we

 7   reconvene. We may not have an objection. I just

 8   have not had a chance to look at that multi-page

 9   document.

10   JUDGE BUSHMANN: That will be fine.

11   I can reserve ruling.

12   MR. ZOBRIST: Thank you.

13   MR. AGATHAN: I apologize, your

14   Honor, but that is the document that we filed the

15   motion to not distribute copies.

16   JUDGE BUSHMANN: And that was

17   granted. I just want to give counsel a chance to

18   review it.

19   MR. AGATHAN: Could I ask that the

20   witness give the copy to the reporter at this

21   point.

22   MR. ZOBRIST: Well, I think it ought

23   to be retained by Mr. Agathan and he gives it to me

24   so I can take a look at it, and then I'll advice if

25   I have an objection. I may not have an objection,

 1   but I need some time to look at the multi-page

 2   document.

 3   MR. AGATHAN: Fair enough. I'll take

 4   the document, give it to Mr. Zobrist.

 5   MR. AGATHAN: I'll now distribute a

 6   copy of Exhibit 338, which is a one-page map

 7   depicting different RTO territories.

 8   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

 9   NO. 338 WAS MARKED FOR IDENTIFICATION BY THE

10   REPORTER.)

11   JUDGE BUSHMANN: Am I correct that's

12   also highly confidential?

13   MR. ZOBRIST: No, I don't believe

14   this is highly confidential. It was part of a

15   group of documents that probably had highly

16   confidential information in it.

17   BY MR. AGATHAN:

18   Q.   Mr. Berry, do you have a copy of

19   what's been marked as Exhibit 338?

20   A.   I do.

21   Q.   Is this a map which Grain Belt

22   provided to us in discovery?

23   A.   Yes, it is.

24   Q.   And does it depict where different

25   RTOs operate in and around the state of Missouri?

 1   A.   Yes, it does.

 2   **Q.   So parts of Missouri are covered by**

 3   **three different RTOs; is that correct?**

 4   A.   I would say there are only two RTOs.

 5   **Q.   Well, I was including Southeast.   I**

 6   **guess that is not an RTO?**

 7   A.   You're correct.

 8   **Q.   So it's covered by three RTOs, MISO,**

 9   **SPP and Southeast?**

10   A.   I'm not sure exactly what the word

11   Southeast means here, but I couldn't say for sure

12   that's not an RTO.

13   MR. AGATHAN: I'd offer Exhibit 338,

14   your Honor.

15   JUDGE BUSHMANN: Objections?

16   MR. ZOBRIST: No objection.

17   JUDGE BUSHMANN: 338 is received into

18   the record.

19   (MISSOURI LANDOWNERS ALLIANCE EXHIBIT

20   NO. 338 WAS RECEIVED INTO EVIDENCE.)

21   BY MR. AGATHAN:

22   **Q.   On a different subject, I'll hand you**

23   **a document titled Grain Belt Clean Line RFI**

24   **Respondents Conference.**

25   MR. AGATHAN: May I approach?

```
 1                    JUDGE BUSHMANN:  Does this involve

 2   highly confidential information?

 3                    MR. AGATHAN:  No, this will not.

 4   BY MR. AGATHAN:

 5        Q.    Mr. Berry, I'm handing you a copy of

 6   a document which is titled Grain Belt Express Clean

 7   Line RFI Respondents Conference.  I wonder if you

 8   could tell me in general what that document is.  I

 9   assume it deals with a conference between Grain

10   Belt and those responding to the RFI?

11        A.    That's correct.

12        Q.    Just a few quick questions.

13   Directing your attention to page 10 of that

14   document.

15                    JUDGE BUSHMANN:  Would you mind using

16   the microphone?  You can use the one right behind

17   you if you want.

18                    MR. AGATHAN:  Thank you, Judge.

19   BY MR. AGATHAN:

20        Q.    Looking at page 10 of that document,

21   there's a notation which says, Early movers

22   advantage guarantees capacity.  Do you see that?

23        A.    I do see it.

24        Q.    What does that mean?

25        A.    It seems to mean that those who sign
```

1 up early for the transmission line would have the

2 guarantee of having capacity on the line.

3   Q.   Guarantee -- guaranteed? It says

4 guaranteed, right?

5   A.   Uh-huh.

6   Q.   And then looking at page 11, it

7 indicates that you will have a transmission charge,

8 I assume, for capacity on your line of

9 approximately 7 to $8 per kilowatt per month; is

10 that correct?

11   A.   That's correct.

12   Q.   There's no indication there of a

13 different charge between Kansas and Missouri than

14 between Kansas and PJM, is there?

15   A.   No. While we've certainly talked

16 about that with shippers, we haven't specifically

17 called it out.

18   Q.   Mr. Berry, I'm now going to hand you

19 a copy of a document which you gave to us in

20 discovery, document No. EA-2014-0207. Just a

21 couple of questions.

22   One of those pages which I have

23 numbered as page 4 shows that the average busbar

24 price for the lowest priced 4000 megawatts of

25 capacity was $20 per megawatt hour; is that

 1   correct?

 2   A.   Correct.

 3   Q.   That's the number we discussed at

 4   some length earlier?

 5   A.   Yes.

 6   Q.   And then on that same page, the

 7   document shows that the average price for all

 8   proposed projects was $27 per megawatt hour,

 9   correct?

10   A.   That's correct.

11   Q.   And as you noted, the bottom of the

12   page, the $27 per megawatt hour figure only

13   reflects the 14 projects which submitted a price;

14   is that correct?

15   A.   Correct.

16   Q.   So the other 15 projects did not give

17   you a price?

18   A.   The 14 projects, right.

19   Q.   You also show on that same page what

20   the wind developers' prices would be without the

21   production tax credit, right?

22   A.   Yes, though I'm not sure if that's

23   just an estimate or something they gave us. It's

24   more likely just our estimate.

25   Q.   For the most competitive

 1   **4000 megawatts, the price goes from $20 to $45; is**

 2   **that correct?**

 3   A.   That's not necessarily my view, but

 4   that is what the document says.

 5   Q.   **So the document says at least that**

 6   **the price without the production tax credit is 2.25**

 7   **times higher than the price with the production tax**

 8   **credit?**

 9   A.   Correct.

10   Q.   **And for the projects reporting a**

11   **price, it went up from $27 to $48, correct?**

12   A.   Correct.

13   Q.   **And that would be 1.8 times higher,**

14   **correct, approximately?**

15   A.   Yes, it would.

16   Q.   **And what I have numbered as page 8 of**

17   **the document, you show that respondents to the RFI**

18   **reported a total capacity for the wind farms of**

19   **13,996 megawatts, correct?**

20   A.   I'm sorry. You're on page 8?

21   Q.   **Page 8.**

22   A.   Okay.

23   Q.   **Looking at the pie chart.**

24   A.   Okay. And is your question about the

25   sum of all of these figures?

 1   Q.   Yes.   13,996 megawatts, subject to

 2   check?

 3   A.   Do it real quick.   That's correct.

 4   Q.   But this figure does not include

 5   respondents who didn't tell you the location of

 6   their wind farm, right, looking at the note at the

 7   bottom?

 8   A.   That's correct.

 9   Q.   Were there any wind farms which

10   reported a busbar price to you but did not report a

11   location?

12   A.   I don't know.

13   Q.   Of those reporting a location to you,

14   about 72 percent of the megawatt capacity's in

15   Kansas, right?

16   A.   That's right.

17   Q.   With the rest in Oklahoma and Texas?

18   A.   Correct.

19   Q.   Trade you documents.   I'm going to

20   hand you a copy again of some data requests and

21   your answers to us.   I'm afraid this is a little

22   bit confusing, but you have listed under Item 2.4

23   some of the respondents to whom you discussed a

24   sale of capacity on your line; is that correct?

25   A.   That's correct.

 1   Q.   Now, without reading the one which is

 2   highly confidential, is that a retail customer in

 3   Missouri?

 4   A.   I believe so.

 5   Q.   And you do not list any of the Kansas

 6   City Power & Light companies or Empire District; is

 7   that correct?

 8   A.   That's correct.

 9   Q.   Thank you.

10   MR. AGATHAN: Your Honor, I have just

11   a limited number of questions, but I believe they

12   all pertain to highly confidential documents.

13   JUDGE BUSHMANN: In that case, we'll

14   go in camera. If anybody in the audience is not

15   authorized to view highly confidential information,

16   I'd ask that you step outside for a few minutes.

17   (REPORTER'S NOTE: At this point, an

18   in-camera session was held, which is contained in

19   Volume 16, pages 1333 to 1347 of the transcript.)

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 1   JUDGE BUSHMANN: Would someone from

 2   Staff notify the people outside that they can come

 3   back in.

 4   We're in public session again, and

 5   we're ready for questions from Commissioners.

 6   Mr. Chairman, do you have any questions?

 7   CHAIRMAN KENNEY: No, I don't think I

 8   do. I think most of the questions I would have

 9   asked have been asked. Thank you, Mr. Berry.

10   THE WITNESS: Thank you, Chairman.

11   JUDGE BUSHMANN: Commissioner Stoll?

12   COMMISSIONER STOLL: And my response

13   would be the same. Thank you for your testimony.

14   THE WITNESS: Thank you,

15   Commissioner.

16   QUESTIONS BY JUDGE BUSHMANN:

17   Q.   I do have -- at the request of

18   Commissioner Kenney, I do have one question to

19   asked, but based on your testimony today, you may

20   not be able to answer this. So if you feel like

21   you can't, just let me know.

22   But Commissioner Kenney asks, what is

23   the difference in the cost of purchasing renewable

24   energy credit and the purchase price of wind energy

25   with and without subsidies? I think he's looking

 1   **for the difference between those two different**

 2   **costs.**

 3   A.   Well, with your permission, Judge, I

 4   can offer a qualitative answer to his question.

 5   Q.   **That will be helpful.**

 6   A.   I don't have a quantitative answer.

 7   A renewable energy credit usually is cheaper than

 8   actually buying renewable energy. The renewable

 9   energy credit just gives you the right to show

10   you're complying with an RES or RPS. Renewable

11   energy actually provides that compliance. It also

12   provides a number of other benefits. So you can

13   actually use the energy purchased to supply -- to

14   supply electric load.

15   And the reason I think that RECs are

16   not actually a preferred way of complying is that

17   the cost of renewable energy, especially the kind

18   of renewable energy provided by our project, has

19   become so affordable that there's no extra cost

20   relative to conventional generation, for example,

21   combined cycle natural gas generation.

22   And we've shown in our testimony and

23   also Dr. Proctor's testimony when we applied some

24   corrections that Kansas wind is actually cheaper

25   than combined cycle gas generation, which is the

 1   cheapest other form of new generation.

 2   So, therefore, I'd say the lowest

 3   cost way to comply with an RPS to purchase low-cost

 4   renewable energy because that actually saves you

 5   money relative to building new thermal generation.

 6   **Q.   Okay.   Thank you.   And how do**

 7   **subsidies play into that?**

 8   A.   Certainly. Well, so the comparison,

 9   both Dr. Proctor and myself actually ran

10   comparisons with and without the subsidies. And

11   with the subsidy, with the production tax credit, I

12   mean, there's a huge advantage to the Kansas wind

13   delivered by the project relative to any other

14   alternative.

15   Without it, it's much closer. I

16   still conclude it's cheaper, and when you apply

17   some corrections to Dr. Proctor's model, it shows

18   it's cheaper as well. But it's certainly -- the

19   gap between the low-cost renewable energy and

20   combined cycle gas generation is much narrower if

21   there is no tax credit.

22   JUDGE BUSHMANN: Thank you. Recross

23   based on Bench questions. Wind on the Wires, Wind

24   Coalition?

25   MR. REED: No questions.

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 1                    JUDGE BUSHMANN:  Commission Staff?

 2                    MR. ANTAL:  No cross.

 3                    JUDGE BUSHMANN:  Reicherts and

 4    Meyers.

 5                    MR. DRAG:  No cross, your Honor.

 6                    JUDGE BUSHMANN:  Show-Me Concerned

 7    Land Owners?

 8                    MR. JARRETT:  No, thank you, Judge.

 9                    JUDGE BUSHMANN:  Landowners Alliance?

10                    MR. AGATHAN:  Nothing, Judge.

11                    JUDGE BUSHMANN:  Redirect by Grain

12    Belt?

13                    MR. ZOBRIST:  Thank you, Judge.

14    REDIRECT EXAMINATION BY MR. ZOBRIST:

15         Q.    Mr. Agathan asked you about binding

16    commitments.  Can you explain what is the normal

17    order of operation for why regulatory approvals

18    like this need to precede binding commitments from

19    load-serving entities?

20         A.    Certainly.  To provide a binding

21    commitment to a shipper on our line to a load-

22    serving entity, we have to be able to commit to a

23    final price of our service and a final schedule.

24    And until we have the approvals, and the approvals

25    for a transmission line are a lengthy process, we
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 1   can't commit to that schedule. And we would be

 2   foolish to commit to a final price of service

 3   before we have our route approved, know exactly

 4   what we're authorized to install.

 5   **Q.   Mr. Agathan showed you segments from**

 6   **the Ameren Integrated Resource Plan for 2014. That**

 7   **was in Exhibit 334. Based on what he did show you,**

 8   **what is the lowest cost new resource in Ameren's**

 9   **2014 IRP?**

10   A.   It's wind energy and specifically

11   wind energy from high-capacity factor resources.

12   **Q.   Do you believe that you can deliver**

13   **energy more cost effectively than Ameren's**

14   **estimates in its 2014 IRP?**

15   A.   Absolutely. When I read this

16   document, I am very optimistic that we can beat the

17   cost estimates in here.

18   **Q.   Now, at the table at the top of the**

19   **final page of Exhibit 334, it's labeled Table 9.2,**

20   **2014 IRP compliance filing model. Can you explain**

21   **that table as far as you have been able to discern**

22   **it?**

23   A.   Yes. And I've actually been able to

24   gather a little more context now. What I believe

25   this table is saying is that over the time frame

 1   2015 to 2024, Ameren actually needs a thousand

 2   megawatts of new wind in order to meet their full

 3   RES requirement. However, they're saying in their

 4   IRP that they will only add 100 megawatts within

 5   that time frame because of the 1 percent rate cap

 6   limit.

 7   So what this tells me is that Ameren

 8   has a very clear need for the lowest cost possible

 9   resources so they can actually meet their RES

10   target and not exceed their cast cap.

11   **Q.   Now, Mr. Agathan showed you some**

12   **documents indicating that the capacity factor that**

13   **resulted from the RFI was below 55 percent. Why**

14   **did you use 55 percent capacity for Kansas wind in**

15   **your model?**

16   A.   Well, first of all, there are

17   projects which today can achieve that. We heard

18   that from Mr. Langley earlier this week.

19   And second of all, the increase in

20   technology is just absolutely clear. When I

21   started in this -- in this industry, no one had

22   ever heard of a 40 percent capacity factor before.

23   And when you went in to finance your projects and

24   told them that you would get a 40 percent capacity

25   factor, people looked at you funny. And now

1   everyone is doing and talking about 50 percent

2   capacity factors. The blades of turbines are

3   getting better. The controls are getting better.

4   The materials are more sophisticated. They're

5   using fiberglass instead of wood.

6   So I'm very confident that we'll

7   continue to see improvements in the technology and,

8   therefore, higher capacity factors.

9   Q.   **Well, based on that, why is your**

10 **Missouri capacity factor appropriate?**

11   A.   Right. Well, in cost of energy

12 analysis, you need to look not just at the highest

13 possible capacity factor but at what's feasible and

14 what's actually attainable within a given area.

15 And if you look at Missouri, the best wind

16 resources are in the northwest corner of the state.

17 Today those are achieving a capacity factor of

18 about 30 percent.

19   To get those from the SPP

20 transmission system to MISO, the same point where

21 we're delivering, there would be an added

22 transmission charge. And I'm not even confident

23 there is very much transmission there.

24   So I looked at a range of capacity

25 factors to recognize that there's some uncertainty

 1   in this. On the one hand there's, unlike in Kansas

 2   when you're building new transmission and you're

 3   building in the best wind sites, you're going to

 4   see it being harder and harder to build in the best

 5   wind sites in Missouri. And that effect, in my

 6   view, sort of balances out the improvement in

 7   technology.

 8   But in any event, what we found is

 9   even when we ran a 35 percent capacity factor as a

10   sensitivity to our model, in almost all of the

11   cases the Kansas wind was still more cost

12   effective.

13   Q.   Mr. Agathan showed you a number of

14   maps and documents regarding the NREL capacity

15   factor tables. Are they meaningful for estimating

16   capacity for specific wind farms?

17   A.   No, they're not. They look at very

18   wide areas. They assume there's transmission

19   available. They assume you can site a wind farm

20   anywhere within that area. And in the case of

21   Kansas, it's such a large number that it really

22   doesn't tell you anything about the windiest sites

23   in the state.

24   So I think they're only relevant for

25   determining the relative wind potentials of

 1   different states. They don't tell you anything

 2   about the capacity factor in a specific site.

 3   **Q.   Mr. Agathan asked you about some of**

 4   **the MISO wind in northwestern Iowa, in that area.**

 5   **Can you briefly summarize why you believe wind**

 6   **energy delivered by the Grain Belt Express project**

 7   **is likely to be more cost effective than MISO wind?**

 8   A.   Well, there's two aspects of this.

 9   There's cost and risk. On cost, it has been the

10   case historically that wind in northwest Iowa and

11   southwestern Minnesota makes up a huge percentage

12   of the wind in the MISO footprint. It's over half

13   of the 13,000 megawatts.

14   They're experiencing very large

15   congestion costs, well over $10 per megawatt hour.

16   They've experienced significant curtailment. And

17   those costs are very volatile. There's really no

18   guarantee you can actually get that energy to

19   Missouri which is several states away.

20   The Grain Belt project offers a

21   direct delivery of energy through HVDC. You're not

22   subject to any congestion costs. You're not

23   subject to any meaningful curtailment risk. So it

24   is a -- it not only has -- there's a whole set of

25   costs that the Grain Belt alternative doesn't have.

1   It's much lower risks in that you can truly have a

2   good handle on your cost of buying wind energy over

3   a 20 or 25-year period.

4   **Q.   Now, Staff has recommended that**

5   **additional tests or models be run by Grain Belt**

6   **that you did not complete. Would it be feasible**

7   **for a single transmission company like Grain Belt**

8   **Express to complete those studies?**

9   A.   Well, for the interconnection

10   studies, absolutely, and we're planning on doing

11   that. But with respect to the modeling of

12   ancillary services and five-minute electric prices,

13   that would be extremely challenging and actually

14   infeasible for us to do that.

15   The studies that are done of the

16   ancillary services markets have to be done

17   system-wide. You have to look at the entirety of

18   the system. You need really granular load data for

19   every bus in the entire system. You need very

20   detailed wind data at the one or five-minute level

21   for all the sites in the system.

22   MISO does studies like that all the

23   time, but we're just not positioned to do them.

24   Just one example. We tried to get one-minute load

25   data to do some additional analysis to try to

 1 address Staff's concern. We asked Staff and they

 2 didn't have it. We asked MISO if we could have it,

 3 and they said, no, we don't give this to people.

 4 So I just don't think we could do those studies

 5 even if we were required.

 6   Q.   Mr. Agathan asked you about national

 7 infrastructure corridor designations, and he handed

 8 you, I believe it was the national -- well, I've

 9 forgotten the title, but it was a 2009 study from

10 the Department of Energy regarding national

11 infrastructure like the transmission corridors. Do

12 you recall that?

13   A.   I do.

14   Q.   And he had you read a sentence or two

15 about two areas that had been designated by the

16 secretary of energy, one in the mid Atlantic region

17 and one in southern California. What's the status

18 of those two designations?

19   A.   My understanding is the courts have

20 thrown them out.

21   Q.   So these have been disapproved by the

22 courts, and there are no existing designations

23 today?

24   A.   Correct. And I also think this

25 program is presently dormant.

 1   Q.   Now, Grain Belt is appearing before

 2   this Commission requesting to be a public utility,

 3   yet it is designating itself as a shipper pays

 4   merchant model. Why should Grain Belt be a public

 5   utility in Missouri?

 6   A.   Well, we are a public utility. We

 7   are a public utility at FERC. We're a public

 8   utility in the state of Kansas. We're a public

 9   utility in the state of Indiana. If we're

10   successful in this proceeding, we'll also seek to

11   be a public utility in the state of Illinois.

12   We will have an open access

13   transmission tariff just as MISO and Ameren

14   transmission has. Any eligible shipper can request

15   service on the line and we'll deliver power for the

16   public to use.

17   So here you have to distinguish

18   between how you pay for the project, and in our

19   case we're proposing to have specific users pay,

20   which is the merchant nature of the project, versus

21   what kind of service it's actually providing. And

22   we're very clearly providing public utility

23   service. We're just following a different business

24   model.

25   Q.   I just have one more question. You

 1 were asked a number of questions about Robert

 2 Zavadil's surrebuttal testimony. Do you recall

 3 that?

 4   A.   I do.

 5   Q.   I'm going to hand you Exhibit 110,

 6 which has been admitted into evidence. Now, on

 7 page 9, 11 to 14, did Mr. Zavadil respond to the

 8 questions that you were asked about his opinion as

 9 far as the potential for wind congestion issues and

10 related integration issues?

11   A.   He did.

12   Q.   And if you'd just read his response

13 there, page 9 beginning at line 11.

14   A.   I would expect that any generator

15 that can already deliver power to the same load

16 within the MISO system can balance the variability

17 of the project's injection, and it is unlikely that

18 additional ramping resources would need to be

19 located near the project's delivery point.

20   Q.   And finally, just one more point.

21 When you were asked by Staff regard to the funding

22 by National Grid, you referred to both an LLC

23 agreement and then a shareholder agreement. What's

24 the proper title of that document?

25   A.   It is the LLC agreement, and I was

 1   referring to the same agreement in both cases.

 2   MR. ZOBRIST: Thank you. Nothing

 3   further, Judge.

 4   JUDGE BUSHMANN: Thank you for your

 5   testimony, Mr. Berry. You may be excused.

 6   THE WITNESS: Does the court reporter

 7   of anyone need copies of some of the exhibits I was

 8   handed or are they already taken care of?

 9   JUDGE BUSHMANN: You can just leave

10   them there.

11   I'm a little unclear as to which

12   witness is up next.

13   (Witness sworn.)

14   MICHAEL S. PROCTOR testified as follows:

15   DIRECT EXAMINATION BY MR. JARRETT:

16   Q.   **Good afternoon. Would you please**

17   **state your name and business address.**

18   A.   My name is Michael S. Proctor. My

19   business address is my home address is 2172

20   Butterfield Court, Maryland Heights, Missouri

21   63043.

22   Q.   **And for whom do you work?**

23   A.   In this case, I am working for the

24   Show-Me Concerned Landowners.

25   Q.   **Other than work for Show-Me Concerned**

1   **Landowners, do you have any other occupation?**

2   A.   Yes. I'm a consultant, and I

3   currently have a contract with the Southwest Power

4   Pool Regional State Committee.

5   **Q.   Did you prepare prefiled rebuttal and**

6   **cross-surrebuttal testimony in this case that has**

7   **been prefiled and premarked as Exhibits 400 and**

8   **401?**

9   A.   Yes, I did.

10   **Q.   Do you have any corrections to those**

11   **testimonies?**

12   A.   Yes. I have a few corrections to

13   Exhibit 400, the rebuttal testimony. On page 7 at

14   line 7, after the $35 per megawatt hour, I should

15   insert up to $48 per megawatt hour.

16   On page 24, line 22, the last line on

17   that page, need to replace the $76.57 per megawatt

18   hour with $75.75 per megawatt hour.

19   And on page 26 at line 14, at the

20   beginning of the sentence starting with the word

21   "by", add the phrase "as a reasonable

22   approximation". Those are all the corrections.

23   **Q.   And other than the corrections you've**

24   **just stated, if I were to ask you the same**

25   **questions in those testimonies today, would your**

 1 **answers be the same?**

 2   A.   Yes, they would.

 3   Q.   **And did you give those testimonies**

 4 **under oath?**

 5   A.   Yes, I did.

 6   MR. JARRETT: Judge, I would offer

 7 Exhibits 400 and 401 and tender the witness for

 8 cross-examination.

 9   JUDGE BUSHMANN: Any objections to

10 the receipt of the exhibits?

11   (No response.)

12   JUDGE BUSHMANN: Hearing none,

13 Exhibits 400 and 401 are received into the record.

14   (SHOW-ME CONCERNED LANDOWNERS EXHIBIT

15 NOS. 400 AND 401 WERE RECEIVED INTO EVIDENCE.)

16   JUDGE BUSHMANN: First

17 cross-examination will be Missouri Landowners

18 Alliance.

19   MR. AGATHAN: I have no questions.

20   JUDGE BUSHMANN: Reicherts and

21 Meyers?

22   MR. DRAG: No questions, your Honor.

23   JUDGE BUSHMANN: Commission Staff?

24   MR. ANTAL: No questions, Judge.

25   JUDGE BUSHMANN: Wind on the Wires,

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 1   Wind Coalition?

 2              MR. REED:  No questions.

 3              JUDGE BUSHMANN:  Grain Belt Express.

 4   CROSS-EXAMINATION BY MR. ZOBRIST:

 5         Q.    Good afternoon.

 6         A.    Good afternoon.

 7         Q.    Dr. Proctor, I understand that you

 8   completed your degree work at Perdue and at the

 9   University of Missouri at Columbia and then you

10   taught at MU for seven years from 1970 to 1977; is

11   that correct?

12         A.    No, that's not correct.  I completed

13   my work at University of Missouri – Columbia,

14   master's degree, ph.D. at Texas A&M University.  I

15   taught at Perdue.

16         Q.    I'm sorry.  That's right.  That's

17   right.  You taught at Perdue and then at Columbia,

18   right?

19         A.    Right.

20         Q.    And you did that from 1970 to 1977?

21         A.    Yes.  That's correct.

22         Q.    And that's when you came to work for

23   the Commission, correct?

24         A.    That's correct.

25         Q.    And during that period of time before
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 1   you came to the Commission, did you work for any

 2   business in the energy field?

 3           A.    No.

 4           Q.    Now, you worked here at the

 5   Commission for 32 years, and you retired at the end

 6   of August of 2009, correct?

 7           A.    That's correct.

 8           Q.    And since that time, you've engaged

 9   in consulting; is that true?

10           A.    That's true.

11           Q.    And have you worked for any

12   for-profit business in the energy field?

13           A.    Let me think.  No.

14           Q.    Now, currently you do work for the

15   Regional State Committee of Southwest Power Pool,

16   correct?

17           A.    Correct.

18           Q.    And the Regional State Committee is

19   the group of state commissioners within SPP, it's

20   not SPP itself, the regional transmission

21   organization?

22           A.    That's correct.

23           Q.    And is it fair to say that you have

24   never worked for or consulted with an independent

25   power producer?
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 1   A.   That's correct.

 2   Q.   And you have not worked for or

 3   consulted with a merchant electric transmission

 4   company?

 5   A.   That's correct.

 6   Q.   Now, do you have any copies of your

 7   DRs with you? Because I have extra copies here if

 8   you --

 9   A.   I have copies of my DR responses.

10   MR. ZOBRIST: Well, Judge, I've

11   marked as Exhibit 126 Dr. Proctor's responses to

12   Grain Belt Express' third set of data requests, and

13   I've got an extra copy for the witness if he

14   doesn't have one. But I'll have this marked at

15   this time.

16   THE WITNESS: Oh, your responses to

17   my DRs?

18   MR. ZOBRIST: No. They're your

19   responses to our DRs.

20   (GRAIN BELT EXPRESS EXHIBIT NO. 126

21   WAS MARKED FOR IDENTIFICATION BY THE REPORTER.)

22   BY MR. ZOBRIST:

23   Q.   Now, Dr. Proctor, on page 4 of

24   your -- these are your responses; is that correct?

25   A.   That's correct.

1   Q.   Okay. Great. On page 4 of your

2   responses, and this is to DR No. 6, we asked, Does

3   Dr. Proctor have any experience in running

4   financial models on behalf of merchant transmission

5   lines and independent power producers that are not

6   subject to rate base rate of return regulation?

7   And your answer was essentially no; is that true?

8   A.   That's true.

9   Q.   And so you have never sold energy on

10   behalf of an IPP or a wind farm, correct?

11   A.   That's correct.

12   Q.   And is it also true that you have

13   never worked for or consulted with a regulated

14   public utility?

15   A.   I'm having to think about that

16   because I did do some work for AECI's Show-Me

17   Transmission Company, but I don't -- it's a

18   cooperative. I don't think it's regulated any

19   longer.

20   Q.   Not regulated by this Commission?

21   A.   That's correct.

22   Q.   Now, you understand in this case that

23   the business plan of Grain Belt Express is that of

24   a participant-funded, shipper pays model?

25   A.   Correct.

1   Q.   And the Grain Belt Express project

2   will not be paid for by ratepayers through the cost

3   allocation process of either MISO or SPP?

4   A.   Correct.

5   Q.   And are you aware that Grain Belt

6   Express has received negotiated rate authority from

7   FERC to charge transmission service rates to direct

8   users of the project?

9   A.   That's my understanding, yes.

10   Q.   And that this kind of a project is

11 known as either a merchant or a shipper pays or a

12 participant funded model, correct?

13   A.   Correct.

14   Q.   So Grain Belt Express is not going to

15 have a rate base on which it earns a rate of

16 return?

17   A.   Correct.

18   Q.   And it will not have cost-based rates

19 set either by this Commission or any state

20 commission, correct?

21   A.   By any state commission, that's

22 correct.

23   Q.   It will be subject to FERC's

24 market-based authority, but it won't be rate

25 regulated by any of the states in MISO or SPP,

 1   correct?

 2   A.   Correct.

 3   Q.   And so Grain Belt Express will have

 4   the ability to negotiate rates with shippers who

 5   use the transmission line?

 6   A.   That's my understanding, yes.

 7   Q.   Now, the model that you present in

 8   your rebuttal testimony is, and I'm quoting now,

 9   how a regulated utility determines levelized costs

10   based on revenue requirements; isn't that true?

11   A.   That's correct for all of the

12   generation alternatives.

13   Q.   And you did this because essentially

14   you don't know what IPPs or merchant transmission

15   companies use internally, correct?

16   A.   I didn't -- well, I'm trying to

17   understand your question. I did not run a

18   rate-based regulation thing for Grain Belt. If

19   that's your question, no. I used the estimates

20   that Mr. Berry had provided in his testimony.

21   Q.   I know you base certain things on

22   Mr. Berry's --

23   A.   Right.

24   Q.   -- model, but you criticized his

25   model because you said it wasn't the type of

 1   regulated model that is brought before this

 2   Commission by regulated public utilities?

 3   A.   Correct, for the generation

 4   alternatives.

 5   Q.   And you actually said in response to

 6   our DR No. 5 that you do not know what other IPPs

 7   or merchant transmission companies use internally,

 8   nor do I know the method that was used by Mr. Berry

 9   whether it is typical of what is used by IPPs or

10   other merchant transmission companies as far as how

11   they determine their levelized cost of energy and

12   capacity?

13   A.   That's correct.

14   Q.   So for that part of your analysis,

15   you didn't use the business model that Grain Belt

16   Express is pursuing here, correct?

17   A.   I did not use for the generation

18   alternatives the same type of analysis that Grain

19   Belt used, that's correct.

20   Q.   And so the generational alternatives

21   are Kansas wind, other wind from MISO, and then a

22   combustion gas turbine or a combined cycle?

23   A.   And Missouri wind, yes.

24   Q.   And so you used a cost-based

25   regulated rate base rate of return model as far as

 1   these generation alternatives that you studied?

 2   A.   That's correct.

 3   Q.   So you -- again, just to confirm, you

 4   didn't use what Mr. Berry used, which derives from

 5   a merchant transmission project and the basis of

 6   his knowledge?

 7   A.   I used the numbers from his merchant

 8   transmission analysis of the transmission. I did

 9   not use his numbers for the evaluation of the

10   generation alternatives, just to be clear.

11   Q.   Right. And you didn't do that

12   because you don't personally have any experience

13   running those kinds of models for non-regulated

14   companies, correct?

15   A.   No. I -- I used the regulated

16   approach because I was looking at it in terms of

17   how I felt the utility needed to look at it in

18   order to meet the Missouri requirements for

19   renewable energy.

20   Q.   So you didn't even look at it from

21   the perspective of Grain Belt Express as a merchant

22   transmission project offering its services?

23   A.   I just -- I think I've answered that

24   question. I used Mr. Berry's analysis of the

25   transmission portion of it, but I didn't use his

 1   analysis for the generation portion.

 2   Q.   All right. That's fine. Now, is it

 3   fair to say that MISO has seen the installation of

 4   over 13,000 megawatts of wind generation since

 5   2005?

 6   A.   That's my understanding.

 7   Q.   And has MISO in the process of

 8   incorporating almost 13 gigawatts into its system,

 9   has it required the installation of simple cycle

10   natural gas generation close to either 80 or

11   90 percent of that wind generation?

12   A.   I don't know.

13   Q.   Now, Mr. Berry uses a 55 percent

14   capacity factor, and you use a 50 percent factor;

15   is that correct?

16   A.   That's correct.

17   Q.   Now, am I correct that you did not

18   refer to any current wind reports or analysis in

19   your rebuttal on planned wind farms for western

20   Kansas?

21   A.   I think I referred to a 2012 report

22   by the Department of Energy.

23   Q.   And my question is, did you refer to

24   any wind reports or analysis of planned wind farms

25   specifically looking at western Kansas?

1   A.   No.

2   Q.   And were you here yesterday when Matt

3   Langley from Infinity Wind testified?

4   A.   No, I was not.

5   Q.   Did you read his cross-surrebuttal

6   testimony at page 3 where he stated that he

7   believed that 55 percent was a reasonable capacity

8   factor considering advances in wind generation

9   technology?

10   A.   I'm aware of that testimony, yes.

11   Q.   And you disagree with that?

12   A.   I disagree.

13   Q.   Is it fair to say that the Department

14   of Energy study that you did rely on, the 2012

15   report, that it did not assess technology that will

16   be in place by 2018 or 2019?

17   A.   No. It was looking at historical

18   performance.

19   Q.   Now, let me shift to another topic,

20   if I might, Dr. Proctor. In your rebuttal

21   testimony, beginning around page 18, you had some

22   references to the estimated cost of transmission

23   projects in Southwest Power Pool; is that correct?

24   A.   That's correct.

25   Q.   And Mr. Jarrett I believe showed

1   Mr. Berry a copy of a white -- pardon me, a copy of

2   a PowerPoint that was produced by SPP in early

3   2011. I've got a copy of a white paper that was

4   published on July 19th, 2011, and I believe that

5   you mentioned that in your testimony; is that

6   correct?

7   A.   I think I mentioned it in response to

8   a data request.

9   MR. ZOBRIST: Judge, I'm going to

10 have this marked as Exhibit 127.

11   (GRAIN BELT EXPRESS EXHIBIT NO. 127

12 WAS MARKED FOR IDENTIFICATION BY THE REPORTER.)

13 BY MR. ZOBRIST:

14   Q.   Do you recognize that report,

15 Dr. Proctor?

16   A.   Yes, I do.

17   Q.   And is that the project cost task

18 force white paper that you referred to in your work

19 papers that was published in July of 2011?

20   A.   Yes.

21   Q.   And is this related to the cost of --

22 pardon me -- the estimates for transmission

23 projects that you talked about?

24   A.   Yes.

25   MR. ZOBRIST: Judge, I move the

 1 admission of Exhibit 127.

 2   JUDGE BUSHMANN: Any objections?

 3   MR. JARRETT: No objection.

 4   MR. ZOBRIST: Judge, I perhaps failed

 5 to offer Exhibit 126. I would do so at this time

 6 as well.

 7   JUDGE BUSHMANN: Any objections to

 8 126?

 9   MR. JARRETT: No objection.

10   JUDGE BUSHMANN: Exhibits 126 and 127

11 are received into the record.

12   (GRAIN BELT EXPRESS EXHIBIT NOS. 126

13 AND 127 WERE RECEIVED INTO EVIDENCE.)

14 BY MR. ZOBRIST:

15   **Q.   Now, Dr. Proctor, is it fair to say**

16 **that this white paper is an updated version of that**

17 **PowerPoint that I believe was published in February**

18 **of 2011?**

19   A.   What this white paper represents is

20 the --

21   **Q.   Could you just answer my question,**

22 **and then you go ahead and explain? Is this an**

23 **updated, more recent version of that PowerPoint?**

24   A.   No.

25   **Q.   Oh, it's not. All right. Please**

 1   **explain.**

 2   A.   This represents the final product of

 3   this project cost tax force. It is -- over time

 4   they worked through how they were going to respond

 5   to the things that were on that. So I wouldn't

 6   characterize it as an updated version of that. I

 7   would characterize it as the final product they

 8   came out with.

 9   **Q.   So it really superseded whatever was**

10   **in the earlier document?**

11   A.   No. The other -- the earlier

12   document represented what was going on at that time

13   and why the -- this issue of cost overruns was a

14   concern to the Southwest Power Pool. This document

15   represents how they are now going to deal with that

16   in the Southwest Power Pool.

17   **Q.   Now, in your rebuttal testimony, is**

18   **it fair to say that you added the cost estimate of**

19   **30 percent to Mr. Berry's numbers based upon this**

20   **report from Southwest Power Pool, Exhibit 127?**

21   A.   I took his levelized cost of $17 per

22   megawatt hour and added 30 percent to come up with

23   the $22 per megawatt hour. But I also noted that

24   part of that increase is due to differences in

25   capacity factors, because I was using a 50 percent

 1   capacity factor, he was using a 55 percent capacity

 2   factor, and you're dealing with levelized numbers,

 3   which means you're dividing by the number of

 4   megawatt hours.

 5   Q.   I appreciate that. I'm focusing just

 6   on that 30 percent figure.

 7   A.   Correct.

 8   Q.   Looking at page 19 of your rebuttal

 9   testimony on lines 4 and 5 --

10   A.   Yes.

11   Q.   -- it says you added 30 percent

12   results in a levelized cost of $22 per megawatt

13   hour?

14   A.   Yes.

15   Q.   And the basis for this 30 percent is

16   the plus or minus 30 percent that is set forth at

17   page 8 of the task force white paper; is that true?

18   A.   Let me find page 8 here just a

19   second. No. I think page 8 refers to the

20   bandwidth that -- that the project task force wants

21   to put around a study level estimate.

22   Q.   Well, the 30 percent figure that you

23   utilized came from your belief that this was in

24   the -- that the Grain Belt Express project was in

25   the study estimate phase; isn't that true?

1   A.   I used the 30 percent, and what I was

2   interested in doing was, because of the cost

3   overruns, I was interested in moving that estimate

4   to the higher end of the range that Grain Belt had

5   given, and I'm slightly higher than that. Their

6   high end range was $20, and mine was 22, but the

7   difference in the capacity factors makes up for

8   that $2. It's 10 percent. So 10 percent of $20

9   would be 22.

10   So I would characterize what I was

11   using was the high end of their estimate, of their

12   range of estimate for the cost of the Grain Belt

13   project.

14   **Q.   Now, are you saying you did not rely**

15   **on the SPP white paper?**

16   A.   On the white paper? No.

17   **Q.   So why did you reference that in the**

18   **response to the data request?**

19   A.   I was giving a -- I was trying to

20   give a complete response to you-all in response to

21   your data request. Maybe I should have said the

22   focus should have been on the PowerPoint

23   presentation where there were cost overruns that

24   were being experienced in SPP, and because of that,

25   they developed this as their --

1   Q.   Well, let's turn to page 11, which is

2   the study estimate stage.

3   A.   Okay.

4   Q.   And that estimates cost variances

5   plus or minus 30 percent; is that true?

6   A.   That's correct.

7   Q.   And at the top box it says what is

8   known, and it says what is unknown. Let's start

9   with what is unknown. Under this plus or minus

10   30 percent, what is unknown is a line route; is

11   that correct?

12   A.   That's correct.

13   Q.   And we do have a line route proposed

14   in this case, true?

15   A.   That's my understanding, yes.

16   Q.   And in terms of what is known, it

17   says rough station locations. In the Grain Belt

18   Express proposal we do have three stations located,

19   three converter stations, correct?

20   A.   That's correct.

21   Q.   And the rough line length is known.

22   It's fairly precise for Missouri. It's about 206

23   miles, correct?

24   A.   That's correct.

25   Q.   And we know the regional geography of

1   the project it's to run from essentially Dodge

2   City, Kansas to the Illinois/Illinois border with a

3   converter station in Ralls County, Missouri, right?

4   A.   That's my understanding. I don't

5   know all the specifics of the line route.

6   Q.   But many of the issues in terms of

7   what is unknown under the CNTC project estimate

8   stage are known in the Grain Belt Express case,

9   correct? We have a proposed --

10   A.   You have a line route. I think you

11   still have regulatory -- some regulatory issues to

12   deal with. I don't know about environmental issues

13   or constraints. I think those have been dealt

14   with, but I'm -- but I'm not sure.

15   Q.   We have a routing study, correct?

16   A.   That's my understanding, yes.

17   Q.   Now, let's go to the next page that

18   says NTC project estimate stage. That's the

19   notification to construct stage, correct?

20   A.   Page 12?

21   Q.   I'm sorry. Page 13.

22   A.   13. Okay. I'm sorry. Ask the

23   question again.

24   Q.   Sure. And actually, under both 12

25   and 13, 12 being the project estimate stage and 13

 1   being the NTC project estimate stage, there the

 2   variance recommended by this white paper is plus or

 3   minus 20 percent, correct?

 4   A.   Correct.

 5   Q.   And there the -- we do know the rough

 6   line length, and we do know the rough station

 7   locations. In fact, they're fairly precise in this

 8   case, correct?

 9   A.   Correct.

10   Q.   And the needed in service, because

11   this is not an RTO cost allocated project, it's for

12   the Commission to decide need, it's not for the RTO

13   to decide, correct?

14   A.   Correct.

15   Q.   And we have a routing study that does

16   deal with environmental issues, constraints and

17   other related matters, correct?

18   A.   Correct.

19   Q.   Why didn't you use 20 percent instead

20   of 30 percent given the fact that Grain Belt

21   Express is closer to these latter stages of

22   planning?

23   A.   Well, I'm sorry if the 30 percent

24   misled you. $17 is a rounded number. The midpoint

25   of their estimate is 17.50. And then if you add

 1 20 percent to that, that gets you -- and then

 2 account for the -- for the differences in the

 3 capacity factors, that gets you up to the $22.

 4   So in effect, using the midpoint, I

 5 do get up -- I am adding 20 percent, if you want to

 6 look at it that way.

 7   Q.   Did you consider decreasing for

 8 efficiency since these ranges that SPP proposes

 9 relate to plus 20 percent or under 20 percent?

10   A.   For -- oh, being below?

11   Q.   Correct.

12   A.   No, I did not.

13   Q.   Now, let me just ask you a couple of

14 questions about the production tax credit. In your

15 analysis, you assumed that the production tax

16 credit is not renewed; is that correct?

17   A.   That's correct.

18   Q.   And if the production tax credit is

19 renewed and would apply to new generation

20 connecting to this project, isn't it true that your

21 analysis shows that the project is cheaper than

22 Missouri wind?

23   A.   That's correct.

24   Q.   And would it also be true that it's

25 cheaper than MISO wind?

 1   A.   Don't think so.

 2   Q.   And would it also be -- would it be

 3   true that it is cheaper than combined cycle gas

 4   plant?

 5   A.   I believe that's the case, but let me

 6   turn to my rebuttal testimony to check on that.

 7   Yes, that would be true.

 8   Q.   Now, let's move on to the comparison

 9   with combined cycle gas generation. You assumed an

10   escalation in the operation and maintenance costs

11   of wind generation, correct?

12   A.   Yes.

13   Q.   And what was that percentage?

14   A.   It wasn't a straight percentage, but

15   I think it averaged out to a little over 5 percent.

16   Q.   Now, am I correct that you did not

17   use any form of escalation or inflation in the O&M

18   expenses of the hypothetical combined cycle?

19   A.   That's correct.

20   Q.   And, in fact, you stated that you had

21   searched for other forecasts on the Energy

22   Information Administration website. You didn't

23   find any, so you didn't use any?

24   A.   Correct.

25   Q.   So is it fair to say that you

 1   presumed zero escalation, essentially zero

 2   inflation costs in the operation of a combined

 3   cycle plant in your study here?

 4   A.   You used two different words, and I'm

 5   going to differentiate between escalation and

 6   inflation.

 7   Q.   You know, I figured you economists

 8   would do that. So go ahead.

 9   A.   I didn't use -- well, to make it

10   straightforward, I didn't use either an

11   inflation -- I didn't factor it up for inflation.

12   I didn't factor it up for escalation.

13   Q.   So is it fair to say that you did

14   assume that there would be no increase in wages of

15   the workers in this hypothetical gas plant?

16   A.   I think that's a fair statement, yes.

17   Q.   And you assumed that there would be

18   no escalation in materials costs, parts costs or

19   any other component parts of the combined cycle gas

20   unit?

21   A.   That's correct.

22   Q.   And yet you escalated the cost of

23   wind generation at over 4 percent, correct?

24   A.   Correct.

25   Q.   Now, property taxes. When you

 1 compared Kansas wind to MISO wind, you did not

 2 include any expense for property taxes?

 3   A.   That's correct.

 4   Q.   And do you understand that there is

 5 no Kansas property tax on wind projects?

 6   A.   I understand that.

 7   Q.   And there is in Missouri and in the

 8 MISO wind states, correct?

 9   A.   That's my understanding, yes.

10   Q.   Now, in your rebuttal testimony, you

11 talk about significant risks posed by environmental

12 regulations, correct?

13   A.   Yes.

14   Q.   On page 24, line 3, you talk about

15 the major risk factors, and one of those is the

16 cost of carbon, correct?

17   A.   Correct.

18   Q.   And is it true that CO2 costs are not

19 being charged to fossil fuel generation at this

20 time?

21   A.   That's correct.

22   Q.   And you say that that's likely going

23 to change?

24   A.   Yes.

25   Q.   And would you agree that carbon cost

 1   is a risk factor that should be included for this

 2   Commission making any risk comparison between MISO

 3   wind, Kansas wind or combined cycle, correct?

 4   A.   Correct. I included it, yes.

 5   Q.   And isn't it fair to say that the

 6   Grain Belt Express project provides an excellent

 7   risk mitigation opportunity for this Commission if

 8   it finds that it meets the five factors?

 9   A.   Risk mitigation to CO2?

10   Q.   Right.

11   A.   CO2 costs?

12   Q   Well, it --

13   A.   It will not have any CO2 risks,

14   that's correct. Wind project will not have CO2

15   risks.

16   Q.   So the real analysis there is whether

17   Kansas wind is cheaper or MISO wind is cheaper?

18   A.   Right.

19   Q.   Now, as far as the RTO approval

20   process, we've had some questions about RTOs,

21   whether they should weigh in on the need for this

22   project. There is no process for any RTO, PJM,

23   MISO, SPP, to make a need determination for this

24   project because it's not cost allocated, correct?

25   A.   I'm trying to digest the concept of

1 need determination. Would you explain that a

2 little bit further?

3   Q.   Well, for example, we talked briefly

4 about the notifications to construct that SPP

5 issues, and as part of the process leading up to

6 that, they make a determination if there's a need

7 for the project so it can receive cost allocation.

8   Is it correct that there is no such

9 process today in any RTO at least in this part of

10 the country, SPP, PJM, MISO, to make that kind of a

11 determination?

12   A.   That's correct.

13   Q.   And that's because this will not be a

14 cost-allocated project?

15   A.   That's right.

16   Q.   And so you don't -- did you have a

17 chance to read Ms. Kliethermes' responses to our

18 DRs? It was very similar to the third set that we

19 sent you. You responded about FERC Order 1000, and

20 she answered no, that neither of the RTOs, SPP,

21 MISO, PJM, currently have any kind of a cost

22 allocation process that would determine benefit of

23 this project.

24   A.   No, I have not read her responses.

25   Q.   Just one final question. We did talk

 1   about the comparisons with Missouri wind and MISO

 2   wind. Are you aware that there was recently a

 3   400 megawatt project that was canceled in northwest

 4   Missouri known as the Mill Creek Wind Energy

 5   Project?

 6   A.   No, I was not aware of that.

 7   MR. ZOBRIST: Thank you, Judge.

 8   That's all I have.

 9   JUDGE BUSHMANN: Questions from

10   Commissioners. Mr. Chairman, do you have any

11   questions?

12   QUESTIONS BY CHAIRMAN KENNEY:

13   Q.   Dr. Proctor, how are you doing?

14   A.   I'm doing well, thank you.

15   Q.   I just have, I think, one question,

16   and it pertains to the capacity factors, the

17   distinction between the capacity factors that you

18   used in your analysis versus capacity factors that

19   Grain Belt experts used for determining cost

20   effectiveness and whether this is an economically

21   feasible project and whether it's needed.

22   And I think you indicated that you

23   disagree with the 55 percent capacity factor that

24   Grain Belt used, correct?

25   A.   That's correct.

```
 1          Q.    And tell me, remind me of the

 2    capacity factor that you assigned.

 3          A.    I used 50 percent.

 4          Q.    And your 50 percent was designated

 5    from research that was historical, correct?

 6          A.    That's correct.

 7          Q.    And Grain Belt used capacity factors

 8    based upon the assumption that the technology would

 9    improve by 2019, correct?

10          A.    That's correct.

11          Q.    And then -- so let me ask you this

12    question, then, given what we've just established.

13    Did you disagree with the idea that the technology

14    will increase and that the capacity factors may

15    increase at some time in the future, or do you

16    disagree with using forward-looking future-based

17    numbers?

18          A.    I guess --

19          Q.    Do you understand my question?  It's

20    a little nuance.

21          A.    Yeah, I understand your question.  My

22    position is that you should base your analysis on

23    what you're going to -- what you can expect to come

24    from this project based upon historic performance.

25    I think you can factor in the technology portion of
```

 1   it to some extent. I think you have to be very

 2   careful when you do that because these are

 3   hoped-for improvements. They are not proven

 4   improvements.

 5   And what I had observed for Kansas

 6   wind farms was that they fell more in the mid --

 7   between 45 and 50 percent from the data that I had

 8   looked at, and that was 2012 data. And I used a

 9   50 percent factor. I went to the high end. That

10   was the highest that had been observed.

11   And I felt that was putting in some

12   compensation for -- for technology improvements.

13   But I -- but moving it all the way up to 55 percent

14   I was not comfortable with. Does that -- does that

15   kind of answer your question?

16   Q.   It does. It does. It helps. So I

17   mean, if I'm -- and don't let me put words in your

18   mouth. But if I'm understanding you, you're not

19   disputing the possibility and maybe even the

20   probability that by 2019 we might have capacity

21   factors of 55 percent?

22   A.   There's no way I can dispute that. I

23   mean, I don't have any evidence that -- I'm not a

24   technology expert on wind generation. So I have no

25   basis for disputing that, the possibility of it.

 1   **Q.   Fair enough.**

 2   CHAIRMAN KENNEY: I don't think I

 3   have any additional questions. Thank you very much

 4   for your time. Good to see you again.

 5   THE WITNESS: Good to see you.

 6   COMMISSIONER STOLL: I have no

 7   questions, but thank you for your testimony.

 8   THE WITNESS: Thank you.

 9   JUDGE BUSHMANN: Recross based on

10   Bench questions. Missouri Landowners Alliance?

11   Any questions, Mr. Agathan?

12   MR. AGATHAN: I'm sorry. No, Judge.

13   JUDGE BUSHMANN: Reicherts and

14   Meyers?

15   MR. DRAG: No questions, your Honor.

16   JUDGE BUSHMANN: Commission Staff?

17   MR. ANTAL: No questions, Judge.

18   JUDGE BUSHMANN: Wind on the Wires,

19   Wind Coalition?

20   MR. REED: No questions.

21   JUDGE BUSHMANN: Grain Belt Express?

22   MR. ZOBRIST: No questions.

23   JUDGE BUSHMANN: Redirect by Show-Me

24   Concerned Landowners?

25   MR. JARRETT: Yes. Just a few,

1 Judge.

2 REDIRECT EXAMINATION BY MR. JARRETT:

3   **Q.   Mr. Zobrist asked you about the O&M**

4 **costs, and in relation especially to why you didn't**

5 **include inflation in the combined cycle plants. So**

6 **my question is, why didn't you factor up inflation**

7 **in that case?**

8   A.   The costs that were reported that I

9 used were the actual costs. So they were nominal

10 costs at that time. I had no evidence of

11 escalation rates for either nominal or real costs,

12 and so I didn't -- I had no basis for inflating

13 those from all the data that was there.

14   I've run several levelized cost

15 studies, and I have -- I have never in my

16 experience seen costs just inflated for inflation.

17 Okay. What I'm interested in are cost escalations

18 and what's causing the costs to escalate.

19   **Q.   And Mr. Zobrist also asked you about**

20 **property taxes --**

21   A.   Yes.

22   **Q.   -- about why you didn't include an**

23 **expense for property taxes, I believe in Missouri**

24 **and other states.**

25   A.   That's correct.

 1   Q.   Why didn't you?

 2   A.   It was just an oversight on my part.

 3   Q.   And how much of an effect would that

 4   have on your analysis?

 5   A.   I actually provided that in response

 6   to my data request. So give me a chance and I'll

 7   look it up.

 8   The property taxes, it depends on the

 9   capacity factor and the wind you're looking at. At

10   a 50 percent capacity factor, it would increase it

11   by $2.37 a megawatt hour. At the lower end, at the

12   30 percent capacity factor, it would increase it by

13     $3.96 a megawatt hour, except for Missouri wind

14   because it takes less capacity to get the same

15   energy credit, it would only be $3.16 a megawatt

16   hour.

17   Q.   And does that change your result in

18   whether wind from MISO versus wind from Kansas is

19   cheaper?

20   A.   No. It's a very small number.

21   Q.   Mr. Zobrist also asked you about -- a

22   couple questions about the RTO approval. Do you

23   remember those?

24   A.   Yes.

25   Q.   And he indicated basically that

 1   none -- no approval was needed there because the --

 2   because there's no cost allocation between the --

 3   like there would be in, say, like a MISO MVP

 4   project.

 5   A.   That's correct.

 6   Q.   Would there be any other effects on

 7   an RTO?

 8   A.   Excuse me. Yes, there would be.

 9   They're fairly minor, and those effects have to do

10   with what happens when wind's not blowing and they

11   need power from the grid to supply the equipment at

12   the wind farm, those types of things. So if

13   they're interconnected to the grid at all, and my

14   understanding is they need to be interconnected for

15   certain purposes, there would be some minor costs

16   associated with that.

17   Q.   Those would be additional costs but

18   minor?

19   A.   But minor, yes.

20   Q.   And do you remember Chairman Kenney

21   asked you some questions about technology

22   improvements?

23   A.   Yes.

24   Q.   If there are technology improvements

25   in Kansas capacity factors because of technology

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 1   **improvements, would you expect comparable**

 2   **improvements in Missouri and MISO wind generation?**

 3   A.   Yes, I would.

 4   MR. JARRETT: I don't have any

 5   further questions. Thank you.

 6   JUDGE BUSHMANN: Thank you for your

 7   testimony, Mr. Proctor. You may step down.

 8   Seems to be a good time for a break,

 9   but I wanted to inquire to the parties as to how

10   many more witnesses we will be needing to do today.

11   One more?

12   MR. ZOBRIST: Let's take a short

13   break, and we'll come back and do that. We'll be

14   in recess until five o'clock.

15   (A BREAK WAS TAKEN.)

16   JUDGE BUSHMANN: We're back on the

17   record. Call your next witness.

18   MR. JARRETT: Judge, we call Kurt

19   Kielisch to the stand.

20   (Witness sworn.)

21   JUDGE BUSHMANN: Thank you.

22   KURT KIELISCH testified as follows:

23   DIRECT EXAMINATION BY MR. JARRETT:

24   Q.   **Good afternoon. Would you please**

25   **state your name and business address.**

 1   A.   Certainly. My name is Kurt Carl

 2   Kielisch. My business address is 116 East Bell

 3   Street, Neenah, Wisconsin 54956.

 4   **Q.   And for whom do you work?**

 5   A.   Forensic Appraisal Group.

 6   **Q.   What is your position there?**

 7   A.   I'm the president and the senior

 8   appraiser.

 9   **Q.   Did you prepare prefiled rebuttal**

10   **testimony in this case that has been prefiled and**

11   **premarked as Exhibit 402?**

12   A.   Yes.

13   **Q.   Do you have any corrections to your**

14   **testimony?**

15   A.   No, I do not.

16   **Q.   If I were to ask you the same**

17   **questions in that testimony today, would your**

18   **answers be the same?**

19   A.   Yes, they would.

20   **Q.   And did you give that testimony under**

21   **oath?**

22   A.   Yes, I did.

23   MR. JARRETT: Judge, I would offer

24   Exhibit 402 and tender the witness for

25   cross-examination.

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 1   JUDGE BUSHMANN: Any objections?

 2   (No response.)

 3   JUDGE BUSHMANN: Hearing none, that

 4 exhibit will be received into the record.

 5   (SHOW-ME CONCERNED LANDOWNERS EXHIBIT

 6 NO. 402 WAS RECEIVED INTO EVIDENCE.)

 7   JUDGE BUSHMANN: First

 8 cross-examination is by Reicherts and Meyers.

 9   MR. DRAG: We have a few questions,

10 your Honor.

11 CROSS-EXAMINATION BY MR. DRAG:

12   **Q.   Mr. Kielisch, my name is Gary Drag,**

13 **and I represent Matthew and Christina Reichert and**

14 **Randall and Roseanne Meyer. Thank you for coming**

15 **here.**

16   **In your experience, have you noticed**

17 **a decrease in the effect of -- or the impact on**

18 **property values as residences move away from the**

19 **power line?**

20   A.   Yes. Distance is a factor as far as

21 the impact goes, and the further away the power

22 line, typically the impact will diminish. Not

23 diminish entirely, but it falls off.

24   **Q.   Is it a linear falloff or logarithmic**

25 **falloff?**

 1   A.   No. It's dependent on the property

 2   and the view shed, how obvious the power line is

 3   and what that looks like from the property.

 4   Q.   **Are you able to go and say at a**

 5   **certain distance that there's really no impact on**

 6   **the property, on the residence?**

 7   A.   Yes. In the past, particularly with

 8   agricultural properties, we have determined

 9   approximately 800 feet to 1,300 feet and beyond

10   would be -- there would be just a nominal impact

11   that would not be measurable.

12   Q.   **Okay. Thank you. Now, in your**

13   **surrebuttal -- I mean in your rebuttal testimony**

14   **you talk about compaction, and from your**

15   **experience, how long -- how long do the results or**

16   **the effects of that compaction last?**

17   MR. ZOBRIST: Objection. Lack of

18   foundation in terms of the effect of compaction.

19   Are we talking generally or are we talking

20   specifically?

21   MR. DRAG: I'll rephrase the

22   question.

23   JUDGE BUSHMANN: Okay.

24   BY MR. DRAG:

25   Q.   **In your rebuttal testimony you talk**

 1   about compaction, and does it have effect on crop

 2   yields?

 3   A.   Yes, it does.

 4   Q.   And what other effects -- are there

 5   any other effects besides crop yield?

 6   A.   For compaction, no.

 7   Q.   In terms of the reduction -- let me

 8   rephrase that.

 9   What is the -- how long does the

10   impact of compaction have on crop yields from a

11   time perspective?

12   A.   From a time perspective, if the

13   compaction is not cured, it's indefinite.

14   Q.   And from your experience, when you

15   have seen efforts made to decompact the soil after

16   construction, how long does it take the yields to

17   recover?

18   A.   Depending on the way that it was

19   corrected. If it was actually corrected the way

20   that the University of Wisconsin Department of

21   Agricultural Sciences recommends, which means to

22   strip off the topsoil down to the compaction and

23   then from there you deep till that with a deep till

24   tine. You usually need a pretty good size tractor

25   to pull that. If that's done and then the topsoil

 1   is put back into its place, typically within two to

 2   three years the land will recover.

 3   Q.   Now, in terms of the -- you mention a

 4   deep tine tilling. How deep do those tines go?

 5   A.   Those tines will go approximately 12

 6   to 18 inches.

 7   Q.   And normally I know it's dependent on

 8   the terrain, but what's an average amount of

 9   topsoil that has to be stripped off?

10   A.   Typically you're going to be looking

11   at at least 8 to probably 12 inches.

12   Q.   Have you seen situations where the

13   decompaction was not done properly?

14   A.   Yes.

15   Q.   And in those cases, how long did it

16   take for the crop yields to recover?

17   MR. ZOBRIST: Judge, I'm going to

18   object. This is not cross-examination. This is

19   like re-redirect examination before

20   cross-examination. So I think it's improper

21   cross-examination and I object.

22   MR. DRAG: I will withdraw the

23   question.

24   JUDGE BUSHMANN: I will give you some

25   leeway, but friendly cross would be inappropriate.

 1   MR. DRAG: That would be my last

 2 question. I can withdraw it or I can let it stand.

 3   JUDGE BUSHMANN: Well, you withdrew

 4 it, so that's fine.

 5   MR. DRAG: I'm done.

 6   JUDGE BUSHMANN: Any questions by

 7 Staff?

 8   MR. WILLIAMS: No questions.

 9   JUDGE BUSHMANN: Wind on the Wires,

10 Wind Coalition?

11   MR. REED: No.

12   JUDGE BUSHMANN: Grain Belt Express?

13 CROSS-EXAMINATION BY MR. ZOBRIST:

14   Q.   Good evening.

15   A.   Good evening.

16   Q.   Mr. Kielisch, I understand you hold

17 two bachelor's degrees, one in biology and one in

18 business administration; is that correct?

19   A.   That's correct.

20   Q.   And you have a master's degree in

21 education from Regent University in Virginia Beach?

22   A.   That's correct.

23   Q.   And that's focusing on, I believe you

24 stated in your CV, adult -- the adult learner and

25 state-of-the-art communication technology?

 1   A.   Yes.

 2   **Q.   So you do not have a degree in**

 3   **engineering, chemistry or physics, correct?**

 4   A.   That's correct. I do not have a

 5   degree in that. I have a minor in chemistry and

 6   physics.

 7   **Q.   You have a minor in chemistry?**

 8   A.   Yes. That was my biology degree.

 9   The minor was in natural sciences, which was

10   chemistry and physics.

11   **Q.   And that's the degree from Silver**

12   **Lake College in Manitowoc, Wisconsin?**

13   A.   That is correct.

14   **Q.   You are not an electrical or**

15   **mechanical engineer?**

16   A.   No.

17   **Q.   And you do not hold a medical degree**

18   **or any degree in the health arts, correct?**

19   A.   That is correct.

20   **Q.   And you're not a neurochemist or a**

21   **neuropsychologist?**

22   A.   No, I am not.

23   **Q.   And is it fair to say that although**

24   **you're an appraiser, you don't hold yourself out as**

25   **an expert in electromagnetic force issues?**

```
 1          A.    That would be correct, other than

 2   their impact to value.

 3          Q.    And you do not hold yourself out as

 4   an expert on GPS systems per se?

 5          A.    That would be correct.

 6          Q.    And you do not hold yourself out as

 7   an expert on voltage issues or electrical safety

 8   issues?

 9          A.    Correct.

10          Q.    And have you ever farmed?

11          A.    No, I have not.

12          Q.    And are you a pilot?

13          A.    I am not.

14          Q.    So you've never conducted any aerial

15   spraying operations yourself?

16          A.    No, I have not.

17          Q.    You did have some testimony on center

18   pivot irrigation system generally, correct?

19          A.    That's correct.

20          Q.    How many center pivot irrigation

21   systems are on the proposed route for the Grain

22   Belt Express in Missouri?

23          A.    I do not know.

24          Q.    Now, in your rebuttal on page 11, you

25   stated that we contacted manufacturers of GPS units
```

 1   which are used in agriculture about GPS, correct?

 2   A.   Correct.

 3   Q.   And I think you quoted a person on

 4   page 11 of your testimony; is that correct?

 5   A.   Yes.

 6   Q.   And you identified him as Max Forest,

 7   capital F-o-r-e-s-t?

 8   A.   Correct.

 9   Q.   Now, in response to either a data

10   request from us or in producing your work papers,

11   you provided an e-mail that you received in March

12   of last year from this person?

13   A.   Yes.

14   Q.   Okay. I marked this as Exhibit 128.

15   (GRAIN BELT EXPRESS EXHIBIT NO. 128

16   WAS MARKED FOR IDENTIFICATION BY THE REPORTER.)

17   BY MR. ZOBRIST:

18   Q.   Is this a copy of the e-mail,

19   Mr. Kielisch, that we've marked as Exhibit 128?

20   A.   Yes, it is.

21   Q.   And at the bottom it's an e-mail from

22   you, and his actual name is De Forest, correct, Max

23   De Forest, capital D-e, capital F-o-r-e-s-t?

24   A.   Oh, De Forest, yes. I didn't catch

25   that before.

 1   Q.   And this is a copy of that e-mail,

 2   correct?

 3   A.   That is correct.

 4   Q.   And it relates to GPS systems, right?

 5   A.   Yes.

 6   Q.   And this is the person that you

 7   referred to on page 11 of your rebuttal?

 8   A.   Correct.

 9   MR. ZOBRIST: Move the admission of

10   Exhibit 128.

11   JUDGE BUSHMANN: Any objections?

12   MR. JARRETT: No objection.

13   JUDGE BUSHMANN: 128 is received into

14   the record.

15   (GRAIN BELT EXPRESS EXHIBIT NO. 128

16   WAS RECEIVED INTO EVIDENCE.)

17   BY MR. ZOBRIST:

18   Q.   So is it fair to say that you

19   e-mailed him back in March 2013 and you got this

20   response?

21   A.   Correct.

22   Q.   Did you investigate his credentials

23   or expertise?

24   A.   I did on the Internet. That's why I

25   made the inquiry.

 1   Q.   Did you happen to get on his LinkedIn

 2   page?

 3   A.   No.

 4   Q.   Let me show you what I'm going to

 5   have the court reporter mark as Exhibit 129.

 6   (GRAIN BELT EXPRESS EXHIBIT NO. 129

 7   WAS MARKED FOR IDENTIFICATION BY THE REPORTER.)

 8   BY MR. ZOBRIST:

 9   Q.   Now, Mr. Kielisch the Max Forest, who

10   appears actually to be Mark De Forest, you describe

11   in your rebuttal testimony as working at Hemisphere

12   GPS in Calgary, Alberta, correct?

13   A.   Correct.

14   Q.   And the LinkedIn page here identifies

15   Max DeForest as a product test and support

16   specialist at Hemisphere GNSS. Is that the same

17   operation here in Calgary, to the best of your

18   knowledge?

19   A.   To the best of my knowledge, yes.

20   Q.   And looking at Mr. De Forest's

21   LinkedIn page -- by the way, LinkedIn you would

22   accept is an Internet tool that we use to establish

23   our credentials, our professional credentials and

24   we engage in professional interactions and use them

25   to search for jobs and make contacts in our

 1   professions, correct?

 2   A.   Yes.

 3   Q.   And it appears that Mr. De Forest was

 4   barista at Starbucks from October 2007 to May 2010,

 5   four years and eight months, in Mesa, Arizona; is

 6   that correct?

 7   A.   It appears that that's what you have

 8   circled here, yes.

 9   Q.   And he spent six years in the U.S.

10   Army Reserves as a microwave system operator

11   maintainer; is that correct?

12   A.   Correct.

13   Q.   Do you know for what period of time

14   he was in the U.S. Army Reserve as a microwave

15   system operator?

16   A.   No. I did not interview him on that.

17   Q.   And on page 2, Mr. De Forest

18   apparently got a job with Hemisphere GNSS and says,

19   just quit Starbucks, it feels so good, with about

20   six exclamation marks, right?

21   A.   Yes.

22   Q.   Okay.

23   A.   Now, we don't know if he was full or

24   part-time there, but...

25   Q.   How long has he been working, if you

 1   **know, for Hemisphere GNSS?**

 2   A.   I did not ask.

 3   MR. ZOBRIST: Move the admission of

 4   Exhibit 129.

 5   JUDGE BUSHMANN: Objections?

 6   MR. JARRETT: I don't have any

 7   objection.

 8   JUDGE BUSHMANN: Exhibit 129 is

 9   received into the record.

10   (GRAIN BELT EXPRESS EXHIBIT NO. 129

11   WAS RECEIVED INTO EVIDENCE.)

12   BY MR. ZOBRIST:

13   **Q.   Now, Mr. Kielisch, you stated in your**

14   **rebuttal on page 2 that you have given testimony in**

15   **a number of courts; is that correct?**

16   A.   That is correct.

17   **Q.   And I believe that on pages 14 --**

18   **pardon me, lines 15 and 16 on page 2 you stated**

19   **that you have testified in state courts and before**

20   **commission hearings in Kansas, North Dakota,**

21   **Minnesota, Ohio and Wisconsin; is that correct?**

22   A.   That's correct.

23   **Q.   Now, did you appear in North Dakota**

24   **District Court in the case of Minnkota Power**

25   **Cooperative, Inc. versus Gary Weigun, W-e-i-g-u-n?**

 1   A.   Yes.

 2   Q.   And let me show you a copy of an

 3   order by the judge in that case called Order on

 4   Motion for Attorney's Fees which I'll have the

 5   court reporter mark as Exhibit 130.

 6   (GRAIN BELT EXPRESS EXHIBIT NO. 130

 7   WAS MARKED FOR IDENTIFICATION BY THE REPORTER.)

 8   BY MR. ZOBRIST:

 9   Q.   Now, Mr. Kielisch, the judge in this

10   proceeding was ruling on a motion for attorney's

11   fees as well as for your fees as an appraiser; is

12   that correct?

13   A.   I believe so. I have not seen this

14   document.

15   Q.   Okay. Let me invite your attention

16   to page 5. About halfway down the page there's a

17   paragraph 9 symbol. It says, Lastly, the

18   defendants seek an award of $16,637.96 in appraisal

19   fees. Defendants have submitted an itemized

20   billing from their appraiser Kurt Kielisch

21   outlining the time spent and hourly rates charged;

22   is that correct?

23   A.   Yes.

24   Q.   Okay.

25   A.   That is.

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 1          Q.      And is it correct that you did

 2   provide appraisal services on behalf of the

 3   defendants in this action?

 4          A.      Yes, that is correct.

 5          Q.      And -- I'm sorry.  On behalf of the

 6   defendants, correct?

 7          A.      Defendants, yes.

 8          Q.      Right.  The plaintiff was the power

 9   company that was a condemnor in this case, correct?

10          A.      Right.  This is the other way around.

11   In the state of Wisconsin and Minnesota it's the

12   other way around.

13          Q.      So Minnkota Power Cooperative was

14   resisting your request for payment of your expert

15   fees as an appraiser in this case, correct?

16          A.      Correct.

17          Q.      And am I accurate that it says here

18   the plaintiff's primary objection to the payment of

19   expert fees is that the fees were unreasonable

20   because the opinions advanced by the expert were

21   flawed, unpersuasive and not credible?  Is that

22   what that says?

23          A.      That is what that says, correct.

24          Q.      And the judge went on to say, It is

25   the court's opinion that this is the plaintiff's
```

 1   best argument for attacking any of costs and

 2   disbursements sought by the defendants. It is

 3   clear from the jury verdict that the jury wholly

 4   disregarded the opinions of defendant's appraiser

 5   Kurt Kielisch, correct?

 6   A.   That is what he said, correct.

 7   Q.   And that's correct? That's what

 8   happened in that jury trial up there, correct?

 9   A.   I don't know what the jury did. I

10   did not interview them. I do know that they

11   awarded I believe it was nearly $50,000 more than

12   what Minnkota was testifying to.

13   Q.   It says here that you were proposing

14   land values as great as $6,100 per acre prior to

15   the taking; is that correct?

16   A.   That is correct.

17   Q.   And the jury found the value of that

18   land to be $3,900 per acre after trial, correct?

19   A.   I don't know. Again, I was not privy

20   to their decision.

21   Q.   On the next page of the order it

22   says, Additionally, as pointed out to the jury

23   during trial, defendant's appraiser's initial

24   report contained significant mistakes which were

25   only corrected after being exposed by plaintiff's

 1 **attorney. Even after making corrections, the**

 2 **testimony at trial indicated that the defendant's**

 3 **appraiser was relying on a second revised appraisal**

 4 **report when being cross-examined by plaintiff's**

 5 **counsel. Is that true?**

 6   A.   That is true to a point, yes.

 7   **Q.   And then Judge Hovi, who was the**

 8 **district judge before whom you appeared, said,**

 9 **Plaintiff's counsel sufficiently impeached the**

10 **credibility of defendant's appraiser with examples**

11 **of misrepresentations while under oath at his**

12 **deposition, and the court agrees that the**

13 **defendant's appraiser's testimony was flawed,**

14 **unpersuasive and non-compelling, correct?**

15   A.   That's what the judge said, right.

16   **Q.   And the judge did not approve your**

17 **request for fees in this case as requested but cut**

18 **it in half, correct?**

19   A.   That is correct.

20   MR. ZOBRIST: Judge, move the

21 admission of Exhibit 130.

22   JUDGE BUSHMANN: Any objections?

23   MR. JARRETT: No objection.

24   JUDGE BUSHMANN: Exhibit 130 is

25 received into the record.

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 1   (GRAIN BELT EXPRESS EXHIBIT NO. 130

 2   WAS RECEIVED INTO EVIDENCE.)

 3   BY MR. ZOBRIST:

 4   Q.   Have you ever testified before a

 5   Missouri circuit court or in U.S. District Court in

 6   the state of Missouri?

 7   A.   No, I have not.

 8   Q.   And this is the first time that

 9   you've testified before this Commission, correct?

10   A.   That is correct.

11   Q.   Now, the studies that you conducted

12   in this case you describe on pages 21 through 24 of

13   your testimony, correct?

14   A.   I believe so. Let me just double

15   check. Yes.

16   Q.   Am I correct that none of these were

17   direct current transmission lines?

18   A.   That is correct.

19   Q.   Now, there were two studies in

20   Kansas, one in Sedgwick County, which is

21   essentially Wichita, and one in Butler County,

22   which is just northeast of Sedgwick County,

23   correct?

24   A.   That is correct.

25   Q.   And the Grain Belt Express project

 1   does not run through either Sedgwick or Butler

 2   County, Kansas; is that true?

 3   A.   I believe so, but I do not know that

 4   for a fact.

 5   Q.   And the two studies that you

 6   submitted, one was in Wisconsin, and then the final

 7   study was in Gibson County, Indiana, correct?

 8   A.   Correct.

 9   Q.   And isn't it also true that the Grain

10   Belt Express not only doesn't run in Wisconsin, but

11   it doesn't terminate in Gibson County, Indiana?

12   A.   Correct.

13   Q.   Now, you have referred to on these

14   pages of your rebuttal testimony no study that you

15   conducted in Missouri, correct?

16   A.   That is correct.

17   Q.   And you have conducted no study in

18   any of the eight counties that the Grain Belt

19   Express project will traverse, correct?

20   A.   Correct.

21   Q.   And, in fact, none of the studies

22   that you've referred to here pass through -- pardon

23   me -- analyzed any of the counties in either

24   Missouri, Illinois, Indiana or Kansas through which

25   the Grain Belt Express project will pass?

 1   A.   That is correct.

 2   Q.   And the studies that you did refer to

 3   were private studies and they've not been published

 4   in the appraisal literature or periodicals; is that

 5   fair to say?

 6   A.   Correct.

 7   Q.   Now, at the beginning of your

 8   rebuttal, it's actually around page 3, you talk

 9   about the value of property being based on the

10   perception of the buyer, correct?

11   A.   Yes. That's correct.

12   Q.   And you state that perception drives

13   value because the foundation in analyzing the

14   effect of something like a transmission line or an

15   external connection -- pardon me, that the

16   foundation in analyzing that is the perception of

17   the buyer, correct?

18   A.   Well, let me think about that

19   question.

20   Q.   Let me rephrase it.

21   A.   Yes, please do.

22   Q.   What you were saying here is that the

23   value of property is based on the perception of the

24   buyer, not actually what the buyer pays for the

25   property?

1   A.   The perception drives the value, yes.

2   **Q.   But isn't it true that the most**

3 **reliable source of information about the effect of**

4 **a transmission line or any externality on property**

5 **values would be the documentation of the actual**

6 **price that a buyer has paid for property?**

7   A.   Well, see that's -- okay. You're

8 mixing two things up. One was I was talking about

9 what is the foundation of market value. The

10 foundation of market value and what drives market

11 value is the perception from the buyer. What

12 you're talking about is the result of that

13 perception.

14   **Q.   And the result of the perception is**

15 **the purchase price, correct?**

16   A.   Correct.

17   **Q.   And would you agree that one of the**

18 **pioneers of research on the effects of transmission**

19 **lines on property is William Kinnard,**

20 **K-i-n-n-a-r-d?**

21   A.   Well, Mr. Kinnard -- and I'm familiar

22 with Mr. Kinnard. He was a pioneer, if you will,

23 in the use of statistical studies sponsored by

24 utility companies.

25   **Q.   Well, you agree that he's an expert**

 1   in the field, don't you?

 2   A.   He is an expert, correct.

 3   Q.   And his opinion is what really

 4   matters is what people do rather than what they say

 5   they will do. Isn't that a fair characterization

 6   of his belief?

 7   A.   Sure. But again, you're mixing two

 8   equations. Mr. Kinnard would not disagree what the

 9   foundation of market value is. What he is

10   referring to is if you, like, have a survey, for

11   instance, an opinion survey and a person says they

12   will do this, but later on when they actually have

13   the dollars on the table, they do something else.

14   That's what Mr. Kinnard was making reference to.

15   Q.   Well, Mr. Kielisch, isn't it true

16   that you yourself through your family have had a

17   situation face you that you gave deposition

18   testimony on where you said that what someone

19   perceives as value may not be a value to someone

20   else, correct?

21   A.   Well, sure. Of course.

22   Q.   And the case that -- where you gave

23   your deposition, it was in a case called Thomas

24   Victory versus Wisconsin Public Service Commission,

25   and the lawyer there was asking you about

1   perception as value. And if I can quote you, you

2   were talking about, in describing the family issue

3   that you had with valuing the company that you and

4   your father had owned, that perceptions,

5   perceptions of value can be stupid?

6   A.   Well, of course they can. I mean,

7   perception is based by experiences, what a person

8   sees, believes and hears and things of that sort.

9   Certainly.

10   Q.   And so would you agree then that what

11 really matters in trying to determine the effect of

12 a transmission line on property is what the actual

13 sum or purchase price of the property would be by a

14 buyer that actually consummates a transaction?

15   A.   Which is the end result of their

16 belief of what that property is worth, which is

17 driven by perception.

18   Q.   Now, in -- toward the end of your

19 rebuttal testimony, I believe it was around 26,

20 pages 26 and 27, you quoted Dr. Thomas Jackson,

21 correct?

22   A.   Did I quote him? No, I did not quote

23 him.

24   Q.   Well, you cited a publication that he

25 prepared at the top -- pardon me -- at the top of

 1   your rebuttal testimony on page 26?

 2   A.   Certainly I cited Mr. Jackson. I do

 3   not believe I quoted him.

 4   Q.   Well, it's actually Dr. Jackson.

 5   He has a Ph.D. and is a professor at Texas A&M

 6   University, I believe.

 7   A.   He's an adjunct professor, correct.

 8   Q.   And he's the president of a real

 9   estate appraisal company, like you're the head of

10   your real estate appraisal company, correct?

11   A.   Which consists of him and a part-time

12   worker, yes.

13   Q.   But you're the one that quoted his

14   article here at page 26 of your rebuttal, correct?

15   A.   Quoted the article? I referenced it,

16   yes.

17   Q.   And let me show you what I believe is

18   a copy of that article that I'll mark as

19   Exhibit 131.

20   (GRAIN BELT EXPRESS EXHIBIT NO. 131

21   WAS MARKED FOR IDENTIFICATION BY THE REPORTER.)

22   BY MR. ZOBRIST:

23   Q.   Am I correct that Exhibit 131 is the

24   article that you cited at the top of page 26 of

25   your rebuttal?

 1   A.   No, it is not. This is -- it's

 2   close. But this is the rebuttal of Mr. Jackson

 3   from the critique that he received on the article

 4   that I cited.

 5   Q.   You're absolutely right.

 6   A.   A closer look.

 7   Q.   I have the other one, which I'll mark

 8   as Exhibit 132.

 9   (GRAND BELT EXPRESS EXHIBIT NO. 132

10   WAS MARKED FOR IDENTIFICATION BY THE REPORTER.)

11   BY MR. ZOBRIST:

12   Q.   Is Exhibit 132 a copy of the earlier

13   article?

14   A.   Yes, that is correct.

15   Q.   And the earlier article, which is

16   called Electric Transmission Lines: Is there an

17   Impact on Rural Land Values? This was published in

18   Right of Way Magazine in November/December 2010,

19   correct?

20   A.   Correct.

21   Q.   And this is the article that

22   concluded at the bottom of page 34, which is the

23   third page of this exhibit, that the general

24   finding was that there were small 1.11 percent to

25   2.44 percent discounts that could be attributable

1   to the presence of the lines and the encumbrance of

2   the properties by the easement. Neither of these

3   small differences were statistically significant.

4   Was that Dr. Jackson's conclusion?

5   A.   That was his conclusion, correct.

6   Q.   And then the second article that we

7   marked as Exhibit 131 is Dr. Jackson's rebuttal to

8   apparently an interim publication that was critical

9   of his conclusions, correct?

10   A.   I believe it was a letter to the

11   editor. It wasn't a publication.

12   Q.   And both of these articles are

13   relevant to electric transmission lines and their

14   effect on rural land values, correct?

15   A.   I would say only the first one. The

16   second one is he was just trying to explain and

17   address the critique that he received in the letter

18   to the editor.

19   Q.   But they all deal with electric

20   transmission lines and his conclusions regarding

21   their impact on rural property, correct?

22   A.   Oh, with that I would agree.

23   MR. ZOBRIST: Okay. I move the

24   admission of Exhibits 131 and 132.

25   JUDGE BUSHMANN: Any objections?

 1   MR. JARRETT: No objection.

 2   JUDGE BUSHMANN: Hearing none, those

 3   two exhibit are received into the record.

 4   (GRAIN BELT EXPRESS EXHIBIT NOS. 131

 5   AND 132 WERE RECEIVED INTO EVIDENCE.)

 6   MR. ZOBRIST: That's all I have,

 7   Judge. Thank you.

 8   JUDGE BUSHMANN: Questions by

 9   Commissioners. Mr. Chairman, do you have any

10   questions?

11   CHAIRMAN KENNEY: No questions.

12   Thank you. Thank you, sir.

13   THE WITNESS: Thank you.

14   JUDGE BUSHMANN: No need for recross.

15   Redirect by Show-Me Concerned Landowners.

16   REDIRECT EXAMINATION BY MR. JARRETT:

17   **Q.   Yes, Mr. Kielisch, I have some**

18   **questions. Exhibit 129, that was the LinkedIn --**

19   A.   Okay.

20   **Q.   -- exhibit from Max De Forest?**

21   A.   Yes.

22   **Q.   And at the time you called him, he**

23   **worked for Hemisphere GNSS, correct?**

24   A.   That is correct.

25   **Q.   What is Hemisphere GNSS?**

 1   A.   Hemisphere GNSS is, as I recall --

 2   this has been a while ago -- they are a GPS

 3   manufacturing and testing operation, and particular

 4   for agricultural properties.

 5   Q.   Okay.

 6   A.   Agricultural equipment, I should say.

 7   Q.   And do you see anything wrong with

 8   working as a barista at Starbucks?

 9   A.   No. Whether it's full or part-time,

10   I see no reason for that.

11   Q.   How about serving six years in the

12   Army Reserve, anything wrong with that?

13   A.   No. I would call that honorable.

14   Q.   I did want to ask you about the court

15   case that Mr. Zobrist asked you about, Exhibit 130.

16   A.   Okay.

17   Q.   Could you explain what happened in

18   this case?

19   A.   Sure, I can explain what happened.

20   You know, as a witness against a power company, you

21   are going to be attacked, as most witnesses are.

22   However, power companies have a lot more power, if

23   you will, and I don't mean that as a pun. They

24   just have much deeper pockets.

25   And what we did here is we did

 1   actually several appraisals in North Dakota, and we

 2   were doing before and after type of analysis, which

 3   is how you would do this appraisal. In one case,

 4   one of our comparable sales was confirmed by the

 5   seller -- sorry, the buyer, was confirmed by the

 6   buyer, and it turned out that there was a mixup

 7   between the buyer and ourselves, and he actually

 8   did buy property, but it wasn't the property that

 9   we were saying he bought.

10   And so we actually had a different

11   property, high voltage transmission line property

12   than the one that he said he thought. And it was

13   fully confirmed. And you have to understand

14   North Dakota a little bit. It's a nondisclosure

15   state, which actually just turned at the end of

16   2013 to a full disclosure state.

17   And so getting property records and

18   details and things of that sort is extremely

19   difficult. The only way you can really do that is

20   by having connections. And sometimes the assessors

21   will confirm sales, but only the sales that people

22   allow them to confirm.

23   So we have to go out on the

24   properties themselves once we find sales to confirm

25   that sale in itself. And so on this one, we

 1   believed we had the right property. It was

 2   confirmed by the buyer. Wouldn't you know, the

 3   buyer also bought a property right at the same

 4   time. I believe the property was in very close

 5   proximity. It turned out to be wrong. Once that

 6   was pointed out to us, we did make that correction.

 7   There's a few other minor problems

 8   that we had. One was a carryover of a adjustment

 9   that actually came from a templated adjustment

10   grid. Again, we did several appraisals. That was

11   corrected once we came to that realization. All

12   this was corrected before the final appraisal was

13   submitted to the court.

14   Q.   Now, how long have you been a

15   licensed real estate appraiser?

16   A.   30 -- well, not licensed for 30

17   years. Licensing began -- well, I received my

18   first license in 19-- I think it was 1994, but I've

19   been licensed since 1994, and I've been in the

20   business for 30 years.

21   Q.   For 30 years. How many appraisals

22   have you done in that time, would you estimate?

23   A.   I would say at least 6 to 8,000.

24   Q.   And have there ever been any other

25   cases like this where a court ruled that your fees

 1   were unreasonable?

 2   A.   There was only one other case, and

 3   that was from ATC. They fought my fees, and we

 4   wanted not only our fees but we wanted interest

 5   because they took forever to pay. In Wisconsin we

 6   have a little different system there where you have

 7   complete recapture if you win the case by

 8   15 percent over what their awarded damage was.

 9   And so ATC, American Transmission

10   Corporation, argued my fees, and I think the judge

11   gave them 1 or $2,000 off, but the fee was

12   something like 26,000.

13   Q.   I see. So other than those two

14   cases, and you said again how many appraisals have

15   you done total you think in your career?

16   A.   I've done about 6 to 8,000

17   appraisals. I've probably given testimony as a

18   witness at least 150, 200 times.

19   Q.   And these are the only two cases

20   where anything was ever challenged that you did?

21   A.   To the best of my knowledge, yes.

22   Q.   Now, Mr. Zobrist asked you a lot of

23   questions about perception as it relates to --

24   relates to a buyer. Do you think perception is

25   important?

 1   A.   Oh, yes, absolutely. It's --

 2 perception is the very foundation of how we derive

 3 value. Just think, how do you derive value between

 4 two items that seem to be similar but say they have

 5 different name brands? If perception doesn't drive

 6 value, you don't have marketing, you don't have

 7 name branding, you don't have any of that, because

 8 that all drives value.

 9   And that's also true in real estate.

10 Developers spend a lot of money to develop a

11 perception of what they're doing. They do it

12 through design. They do it through promotion, lots

13 of different ways. And a person develops their

14 opinion of value by how they perceive something,

15 whether it's valuable or not, and if it is, how

16 much.

17   Now, that perception is driven by

18 many, many different factors, but perception is the

19 very foundation of how we derive value. When we --

20 once we have made that perception, made that

21 decision and we have purchased the item, then

22 that's a sales price. That is a, if you will, a

23 rubber stamp of the perception.

24   Q.   **And in your experience of doing**

25 **appraisals, especially on farmland with high**

 1   **voltage transmission lines, would you say**

 2   **perception is an important factor in how people**

 3   **view the value of the land?**

 4   A.   Absolutely.

 5   Q.   **And does it positively or negatively**

 6   **impact the value?**

 7   A.   Mostly negatively.

 8   Q.   **All right. Is there any quantifiable**

 9   **amount that you -- that you know of or does it**

10   **vary?**

11   A.   Well, it will vary according to the

12   type of power line, the size, the width of the

13   easement, the perceived size of the line, and by

14   that I mean in kilovolts. And I say perceived

15   because I've yet to find a buyer who knows the size

16   of the land. They just sort of quantify it as

17   small, medium and large, but they don't know what

18   the kilovolts are. Whether it's AC or DC doesn't

19   mean anything to them, in my opinion. Where it's

20   located on the property and the view shed. All of

21   these things work into that perception, and then

22   the perception of what they believe a power line

23   does. Whether it's a factual scientific proof or

24   not is irrelevant. It's what does the buyer

25   believe and then how do they act on that belief.

 1   MR. JARRETT: Okay. Thank you. I

 2   don't have any further questions.

 3   JUDGE BUSHMANN: Thank you, Mr.

 4   Kielisch. That completes your testimony, sir. You

 5   may be excused.

 6   Are there any further witnesses for

 7   this evening?

 8   MR. ZOBRIST: None from Grain Belt

 9   Express. Judge, Mr. Murray is here. We could do

10   very briefly on him.

11   JUDGE BUSHMANN: That's what I was

12   wondering. I didn't think there was going to be a

13   lot of questions.

14   MR. ZOBRIST: No. Pardon me. I

15   thought he perhaps had left for the day, but if

16   he's here, that's fine.

17   (AN OFF-THE-RECORD DISCUSSION WAS

18   HELD.)

19   JUDGE BUSHMANN: Call your witness,

20   please.

21   MS. MAYFIELD: Yes, your Honor. I'd

22   like to call Dave Murray, please.

23   (Witness sworn.)

24   JUDGE BUSHMANN: You may be seated.

25   DAVID MURRAY testified as follows:

 1   DIRECT EXAMINATION BY MS. MAYFIELD:

 2   **Q.   Could you please state your name.**

 3   A.   David Murray.

 4   **Q.   And how are you currently employed?**

 5   A.   Employed as a utility regulatory

 6   manager in the financial analysis units, utility

 7   services division.

 8   **Q.   And that's with the Missouri Public**

 9   **Service Commission?**

10   A.   It is.

11   **Q.   And did you prepare or cause to be**

12   **prepared prefiled rebuttal testimony in this matter**

13   **marked as Exhibit 204?**

14   A.   Yes, I did.

15   **Q.   And do you have any changes or**

16   **corrections to that testimony?**

17   A.   Yes. Based on testimony that

18   Mr. David Berry gave earlier today, I realize the

19   premise of one of the conditions I had is, you

20   know, not what I had, you know, thought at the time

21   I wrote the testimony. So I propose to eliminate

22   the second condition, which is on page 11 of my

23   testimony, rebuttal testimony, line 1 through 3.

24   **Q.   And that's the condition related to**

25   **ZAM Ventures guarantee; is that correct?**

 1   A.   Yes.

 2   Q.   **If I would ask you the same questions**

 3   **as contained in your rebuttal testimony today,**

 4   **would your answers be the same except for the**

 5   **change you just pointed out?**

 6   A.   Let me also talk about the other

 7   condition, the first condition that I had. Even

 8   though we still -- Staff still wants to keep the

 9   condition in there, we accept what Mr. Berry

10   recommended as far as how to alter the language and

11   combine it with Mr. Dan Beck's condition, and that

12   is reflected in Staff's position statement.

13   Q.   **So outside of those two corrections**

14   **or additions that you just identified, again, if I**

15   **were to ask you the same questions as are contained**

16   **in your rebuttal testimony today, would your**

17   **answers be the same?**

18   A.   Yes.

19   MS. MAYFIELD: I move for the

20   admission of Exhibit 204 into evidence.

21   JUDGE BUSHMANN: Let me just ask one

22   question to clarify, Mr. Murray. You just said

23   that there was another -- I got the first

24   correction was elimination and you mentioned lines

25   on a page that you wanted to eliminate. The second

 1 change you were talking about, did that involve any

 2 actual corrections to the words on any of the lines

 3 and pages and the testimony that you have, or is

 4 that something you'd like to testify about once you

 5 are being questioned?

 6   THE WITNESS: I can testify about it

 7 once I'm being questioned. It's actually response

 8 to Mr. Berry's surrebuttal testimony.

 9   JUDGE BUSHMANN: I'm just trying to

10 figure out whether in your rebuttal testimony that

11 you're correcting, whether you're actually changing

12 any of the -- in response to that particular

13 condition you're talking about, whether you're

14 changing any of the testimony.

15   THE WITNESS: No, I'm not changing

16 the testimony.

17   JUDGE BUSHMANN: So Exhibit 204 has

18 been offered. Are there any objections to its

19 receipt?

20   MR. ZOBRIST: No objection.

21   JUDGE BUSHMANN: Exhibit 204 will be

22 received into the record.

23   (STAFF EXHIBIT NO. 204 WAS RECEIVED

24 INTO EVIDENCE.)

25   MS. MAYFIELD: And, your Honor, I

 1   would tender this witness for cross-examination.

 2   JUDGE BUSHMANN: First cross would be

 3   Show-Me Concerned Landowners.

 4   MR. JARRETT: No questions, Judge.

 5   JUDGE BUSHMANN: Reicherts and

 6   Meyers?

 7   MR. DRAG: No questions, your Honor.

 8   JUDGE BUSHMANN: Wind on the Wires

 9   Coalition?

10   MR. REED: No questions.

11   JUDGE BUSHMANN: Grain Belt Express?

12   CROSS-EXAMINATION BY MR. ZOBRIST:

13   Q.   **Mr. Murray, do you happen to have**

14   **Mr. Berry's Schedule DAB-14 where he put in the**

15   **additional language to -- as an addendum to**

16   **Mr. Beck's condition?**

17   A.   I have his -- the portion of his

18   testimony that discussed the revisions or the

19   proposed revisions. I don't have that specific

20   schedule.

21   Q.   **What would be the easiest way to**

22   **clarify? Because I've got a copy of the schedule**

23   **right here, and we could read that in or --**

24   A.   Page 54 and 55 of his testimony

25   outline the specific proposed changes to the

 1   condition.

 2   Q.   Okay.   And that's reflected at the

 3   bottom of Staff's position statement -- pardon

 4   me -- the bottom of page 13 on Staff's position

 5   statement; is that correct?

 6   A.   It is.

 7   Q.   Can I just read this into the record?

 8   What Mr. Berry stated was that Grain Belt Express

 9   recommended adding the following text to Mr. Beck's

10   proposed condition 5D, which is at Mr. Beck's

11   rebuttal testimony, page 19, lines 3 through 5.   It

12   was Mr. Berry's recommendation and Grain Belt

13   Express' recommendation that it be, We reflect the

14   concepts in Mr. Murray's condition that this

15   language be added, quote, and, paren 2, close

16   paren, the contracted transmission service revenue

17   is sufficient to service the debt financing of the

18   project, paren, taking into account any planned

19   refinancing of debt, close paren, period.

20   Is that acceptable to you and to

21   Staff?

22   A.   Yes, it is.

23   MR. ZOBRIST: No further questions,

24   Judge.

25   JUDGE BUSHMANN: Mr. Chairman, do you

 1   have any questions?

 2   CHAIRMAN KENNEY: No questions.

 3   Thank you, Mr. Murray.

 4   THE WITNESS: Thank you.

 5   JUDGE BUSHMANN: No recross. Any

 6   redirect by Staff?

 7   MS. MAYFIELD: No, your Honor.

 8   JUDGE BUSHMANN: Thank you,

 9   Mr. Murray.

10   THE WITNESS: Thank you very much.

11   MR. WILLIAMS: Judge, just for -- I

12   think it's already clear, but just to make it

13   patently clear, earlier in the hearing I pointed

14   out that on the bottom page 13, the language which

15   tracks the language that Mr. Zobrist just read in

16   Staff's position statement should have been

17   attributed to Mr. Murray instead of Mr. Beck.

18   That's the same thing we've been talking about here

19   now.

20   JUDGE BUSHMANN: Okay. Thank you for

21   making that clarification. I think that concludes

22   testimony for today. We will reconvene at 8:30 in

23   the morning on Friday November 21st, and I guess we

24   will take Ms. Kliethermes at that time, is that

25   correct, and then the other witnesses that are

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 1   required to be that day, and we'll follow the

 2   witness list as closely as we can. We are off the

 3   record.

 4   (WHEREUPON, the hearing was adjourned

 5   at 5:47 p.m., to be resumed November 21, 2014.)

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 2   C E R T I F I C A T E

 3   STATE OF MISSOURI)

) ss.

 4   COUNTY OF COLE   )

 5   I, Kellene K. Feddersen, Certified

 6   Shorthand Reporter with the firm of Midwest

 7   Litigation Services, do hereby certify that I was

 8   personally present at the proceedings had in the

 9   above-entitled cause at the time and place set

10   forth in the caption sheet thereof; that I then and

11   there took down in Stenotype the proceedings had;

12   and that the foregoing is a full, true and correct

13   transcript of such Stenotype notes so made at such

14   time and place.

15   Given at my office in the City of

16   Jefferson, County of Cole, State of Missouri.

17

18

19   _____

            Kellene K. Feddersen, RPR, CSR, CCR

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