 1   STATE OF MISSOURI

 2   PUBLIC SERVICE COMMISSION

 3

 4   TRANSCRIPT OF PROCEEDINGS

 5

 6   Evidentiary Hearing

 7   March 23, 2017

 8   Missouri Public Service Commission

 9   At Jefferson City

10   VOLUME 16

11

12   In the Matter of the Application)
     of Grain Belt Express Clean Line)
13   LLC for a Certificate of   )
     Convenience and Necessity   )
14   Authorizing it to Construct, Own,)
     Operate, Control, Manage and   ) File No.
15   Maintain a High Voltage, Direct) EA-2016-0358
     Current Transmission Line and an)
16   Associated Converter Station   )
     Providing an Interconnection on)
17   the Maywood-Montgomery 345kV   )
     Transmission Line

18

19   MICHAEL BUSHMANN, PRESIDING
              SENIOR REGULATORY LAW JUDGE
20
          DANIEL Y. HALL, Chairman
21   WILLIAM P. KENNEY,
          STEPHEN M. STOLL
22   SCOTT T. RUPP
          MAIDA J. COLEMAN,
23   COMMISSIONERS

24   REPORTED BY:

25   TARA SCHWAKE, RPR, CRR, CSR

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 1                    PROCEEDINGS

 2                    JUDGE BUSHMANN:  Let's go on the

 3   record.  Good morning.  Today is March 23, 2017, it

 4   is the fourth day in the evidentiary hearing for

 5   file number EA-2016-0358.

 6                    At this point we're ready to take the

 7   next witness, which would be the first witness for

 8   MJMEUC.

 9                    MR. HEALY:  We would call Duncan

10   Kincheloe to the stand.

11                    DUNCAN KINCHELOE,

12           having been called as a witness, was sworn

13           by the Court, upon his oath, and testified

14           as follows:

15                    DIRECT EXAMINATION

16   QUESTIONS BY MR. HEALY:

17           Q     Good morning.

18           A     Good morning.

19           Q     Can you state your name for the

20   Court, please?

21           A     Duncan E. Kincheloe, III.

22           Q     And who is your employer, Mr.

23   Kincheloe?

24           A     My attorney?

25           Q     Your employer.
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 1   A   My employer. Missouri Joint

 2   Municipal Electric Utility Commission.

 3   **Q   What's your position there?**

 4   A   Chief Executive Officer, President,

 5   CEO.

 6   **Q   And you caused rebuttal testimony to**

 7   **be filed in this case, that's been marked Exhibit**

 8   **475; is that correct?**

 9   A   That's correct.

10   **Q   And if I asked you questions**

11   **contained in that exhibit and that testimony, would**

12   **your answers be the same today as they were when**

13   **they filed that testimony?**

14   A   Yes, there are some things that could

15   be updated, but as of the time it was submitted,

16   yes.

17   (Wherein, Exhibit 475 was

18   introduced.)

19   MR. HEALY: Okay, I'd move for the

20   introduction of 475.

21   JUDGE BUSHMANN: Exhibit 475 has been

22   offered. Is there any objection? Hearing none,

23   that is received into the record.

24   MR. HEALY: I would tender the

25   witness for cross.

 1   JUDGE BUSHMANN: First cross would be

 2 by Grain Belt.

 3   MR. ZOBRIST: No questions.

 4   JUDGE BUSHMANN: Mr. Robertson, are

 5 you representing Sierra Club today?

 6   MR. ROBERTSON: Sierra Club and NRDC.

 7 No questions.

 8   JUDGE BUSHMANN: Wind on the Wires?

 9   MR. BRADY: No questions.

10   JUDGE BUSHMANN: Infinity Wind Power?

11   MS. PEMBERTON: No questions, Judge.

12   JUDGE BUSHMANN: MIEC?

13   MR. MILLS: No questions.

14   JUDGE BUSHMANN: Commission Staff?

15   MR. WILLIAMS: Thank you. You

16 clearly invited one.

17   CROSS-EXAMINATION

18 QUESTIONS BY MR. WILLIAMS:

19   **Q   What would you update in your**

20 **testimony?**

21   A   Well, as to the question regarding

22 indications of municipal interest in renewable

23 power, that was posed in the testimony, the

24 additional indications that I would point to are we

25 have more recently concluded contracts with the --

 1   in addition to the MoBap commitment, we've

 2   concluded contracts to supply Kirkwood Municipal

 3   Utility and I think Mark Petty, Director of

 4   Utilities, is here today, for 25 megawatts of power

 5   associated with this project, and on Tuesday night

 6   the Hannibal City Council authorized and later

 7   signed a contract with us for 15 megawatts of

 8   power.

 9   So that brings that status of

10   completed contracts and commitments to 100

11   megawatts in addition to the 35 megawatts that we

12   have indications that Columbia Water & Light wants

13   to enter into and the megawatt from Centralia. And

14   so those are the current updates as to municipal

15   interests.

16   **Q   Now, what MJMEUC is obtaining from**

17   **Grain Belt is transmission only; correct?**

18   A   From Grain Belt, yes.

19   **Q   And whenever you're evaluating the**

20   **economics of obtaining wind power from a source,**

21   **you need to look at not only the cost of the**

22   **generation, but also the transmission from the**

23   **source, do you not?**

24   A   Yes.

25   **Q   And are you familiar with multi value**

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 1   projects in MISO?

 2          A     Yes, generally.

 3          Q     And are the costs of those spread out

 4   among the members of MISO in charge, whether or not

 5   the member is using that transmission facility?

 6          A     What was the last phrase?

 7          Q     Let me put it this way.  Do you know

 8   how the cost of those projects are allocated in

 9   MISO?

10          A     In general fashion, yes.

11          Q     And how are they allocated?

12          A     They're allocated to those in

13   proportion, theoretically at least, to those

14   members of MISO, participants in MISO that are

15   presumably benefiting from those and for a

16   multi-value project, it would be broadly.

17          Q     Well, let me give you an example.

18   Let's say Union Electric Company has a generation

19   source in Iowa that it's going to take power from

20   and bring that power into its load in Missouri.  If

21   it's bringing that power across MVP facilities,

22   would it pay an additional amount for that

23   transmission service?  Or is it already paid by the

24   cost allocation?

25          A     If it's across existing facilities,
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1 they are there for general purposes, it's already

2 paying that.

3   Q   What if there are facilities being

4 built but they are multi-value project facilities?

5 Same answer?

6   A   If they're multi-value projects,

7 well, I'm not sure I should -- I'm not an expert on

8 that. I'd probably defer to my Chief Operating

9 Officer.

10   Q   So if I want to follow up on that, I

11 should ask Mr. Grotzinger?

12   A   Certainly he would be better able to

13 follow up on that line of questioning, yes.

14   Q   Do you know if any Missouri utilities

15 who serve load are obtaining power from southwest

16 Kansas presently?

17   A   I'm not certain. I know City

18 Utilities of Springfield has some power in Kansas,

19 but exactly what part of Kansas, I'm not certain.

20   Q   You don't know anything about what --

21 where KCPL is obtaining any of its energy?

22   A   I'm not familiar with KCPL's

23 supplier.

24   MR. WILLIAMS: No further questions.

25   JUDGE BUSHMANN: Rockies Express?

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 1                    MS. GIBONEY:  No questions, Judge.

 2                    JUDGE BUSHMANN:  Show Me Landowners?

 3                    MR. LINTON:  No questions.

 4                    JUDGE BUSHMANN:  Missouri Landowners?

 5                    MR. AGATHEN:  Thank you, Your Honor.

 6                       CROSS-EXAMINATION

 7   QUESTIONS BY MR. AGATHEN:

 8           Q       Good morning, Mr. Kincheloe.  As I

 9   understand your situation, MJMEUC plans to use 60

10   megawatts of the capacity in the Grain Belt for the

11   MoPEP group; is that correct?

12           A       That's correct.

13           Q       Just for the sake of the reporter,

14   MJMEUC is M-J-M-E-U-C,correct?

15           A       Yes.

16           Q       And MoPEP is what?

17           A       MoPEP?  Missouri Public Energy Pool

18   Number 1.

19           Q       And what's the acronym we're using?

20           A       M-o-P-E-P.

21           Q       Thank you.  MJMEUC will basically

22   sell that 60 megawatts to individual municipal

23   systems which are members of MoPEP; right?

24           A       That's generally right, yes.

25           Q       And members of MJMEUC which are not
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1   members of MoPEP could also purchase capacity on

2   the line, at least up to the 200 megawatt limit;

3   correct?

4   A   That's correct.

5   Q   And at this point Grain Belt is

6   saying they expect to energize the line in November

7   of 2021; is that correct?

8   A   Yes.

9   Q   Do you consider that you and MJMEUC

10   have a fiduciary duty to the member systems in

11   MJMEUC?

12   A   Yes.

13   Q   And do you believe that your

14   fiduciary duty brings with it an obligation to

15   periodically review the possible alternatives which

16   might used in lieu of the Grain Belt contract?

17   A   That might be used what?

18   Q   In lieu of the Grain Belt contract?

19   A   Well, that's an essential function of

20   MJMEUC is to stay abreast of power supply

21   opportunities and to present those opportunities to

22   our members for utilities.

23   Q   So the answer would be yes?

24   A   As I understand your question, yes.

25   Q   We don't know at this point what will

1   be available even three years from now, do we?

2   A   There will be additional occurrences

3   between now and three years from now, yes.

4   Q   **We don't have a crystal ball,**

5   **unfortunately?**

6   A   We do not.

7   Q   **Passing planning's a lot more**

8   **difficult now than it used to be, isn't it?**

9   A   Yes, I suppose that's true.

10   Q   **On a different subject, I assume you**

11   **weren't able to attend the local public hearings in**

12   **this case in Hannibal, were you?**

13   A   No, I was not.

14   Q   **That's one of the cities which has**

15   **shown an interest in signing up for power on the**

16   **Grain Belt line?**

17   A   We have a contract with the City of

18   Hannibal, yes.

19   Q   **If the officials from Hannibal**

20   **testified at those hearings that the lower cost**

21   **power from the Grain Belt line would allow them to**

22   **attract new investment and new jobs into their**

23   **city, would you agree with that?**

24   A   I would -- I would believe them if

25   they said that, yes.

1   Q   Do you believe that lower cost

2   electricity rates from the Grain Belt line will

3   allow participating cities to attract new

4   investment and new jobs?

5   A   I think it improves the odds for

6   that. More importantly, I'm convinced it will help

7   many of the smaller communities, particularly in

8   northern Missouri, to retain the economic activity

9   that's currently in those cities.

10   Q   By reason of these lower rates?

11   A   Exactly.

12   Q   Not all MJMEUC members will be taking

13   power from the Grain Belt line, will they?

14   A   That's correct.

15   Q   So some municipalities will get the

16   advantages of the discounted rate provided by a

17   contract with Grain Belt and others will not;

18   correct?

19   A   Only those that choose to.

20   Q   And so the cities, the ones without

21   the discounted rates, will be at a disadvantage in

22   attracting new investment vis-a-vis the cities

23   getting the discounted Grain Belt rate; right?

24   A   Well, presumably they're making that

25   judgment based on their opportunities to take

 1   advantage of other supplies that are most

 2   advantageous to them.

 3   **Q   But if they don't take advantage of**

 4   **the lower MJMEUC rate, they will be at a**

 5   **disadvantage vis-a-vis the ones who get the**

 6   **discounted rate?**

 7   A   Well, as I say, I think every

 8   municipal utility makes its judgment as to what the

 9   most advantageous supply opportunity we can present

10   to them or they can find elsewhere.

11   **Q   But if you hit the 200 megawatt**

12   **limit, then that discounted rate is no longer**

13   **available to these other municipal systems;**

14   **correct?**

15   A   Okay. Yeah, if our opportunity is

16   limited to 200 megawatts.

17   **Q   On a different subject, you told us**

18   **that after this Commission's decision in the 2014**

19   **case, the first time Grain Belt approached you**

20   **again about buying capacity on their line was**

21   **September 22 of 2015. Is that about correct?**

22   A   I think that's the best knowledge we

23   could find based on somebody searching the records

24   for us.

25   **Q   So about two to three months,**

1   roughly, after the order was issued?

2   A   If that's what order was issued, yes.

3   Q   And in January of 2015 Grain Belt

4   initiated their first open solicitation of bids for

5   capacity on the line; is that approximately right?

6   A   Apparently so.

7   Q   And Grain Belt made sure you were

8   aware of that bidding process, didn't they?

9   A   In January of 2015 did you say?

10   Q   January 2015 or within a couple

11   months thereafter?

12   A   Yeah, I can't say I was made

13   personally aware of that.

14   Q   Well, they made you aware of the fact

15   that there was an open solicitation that they were

16   accepting bids, did they not?

17   A   I assume that they notified us. I

18   can't say I was aware of it at the time. Now.

19   Personally.

20   Q   Mr. Kincheloe, I'm handing you a copy

21   of an e-mail which is dated February 25th of 2015

22   from someone at Clean Line and they do mention at

23   that point in their e-mail that they are taking

24   bids for capacity, do they not?

25   A   Yes.

 1   Q   Despite the fact that submitting a

 2   bid was risk free and cost free, did MJMEUC submit

 3   a bid to Grain Belt in response to their January

 4   2015 open solicitation?

 5   A   We were in the midst of a study at

 6   that time, so I don't believe that we did.

 7   JUDGE BUSHMANN: Can I get you to

 8   move a little closer to the mic? Thank you.

 9   Q   (BY MR. AGATHEN) So you didn't see a

10   need at that point to buy capacity on the Grain

11   Belt line; is that correct?

12   A   At that time, that's correct.

13   Q   And just one more series of

14   questions. You mentioned some municipal systems

15   this morning, I believe, which expressed an

16   interest in signing up for the Grain Belt capacity?

17   A   Yes.

18   Q   You didn't mention the City of

19   Kirkwood, did you?

20   A   I thought I had. Kirkwood has signed

21   a contract for 25 megawatts.

22   Q   I take that back, I do see that. We

23   asked you for a copy of the documents which would

24   indicate an expression of -- or a binding contract

25   by your member utilities to take capacity from the

 1 **Grain Belt line. Do you recall that?**

 2   A   I'm -- I think I'm generally aware of

 3 that.

 4   **Q   And the only contract you provided**

 5 **was the one with the City of Kirkwood, was it not?**

 6   A   If that's the state of the record,

 7 I...

 8   MR. HEALY: Judge, I'd object. We

 9 actually supplemented that DR yesterday morning

10 with the Hannibal contract as well, and I'm not

11 sure opposing counsel may have seen the DR update.

12   MR. AGATHEN: So you gave us two

13 contracts at this point?

14   MR. HEALY: Total of three. The

15 commitment to MoPEP for 60, and then Hannibal for

16 15, and Kirkwood for 25; correct.

17   **Q   (BY MR. AGATHEN) Mr. Kincheloe, I'm**

18 **handing you a copy of a document and asking you if**

19 **that's a copy of your contract with the City of**

20 **Kirkwood and MJMEUC to purchase the capacity on the**

21 **Grain Belt line?**

22   A   Yes, it appears to be.

23   **Q   And that contract was dated as of**

24 **March 15, 2017?**

25   A   Yes.

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 1          Q      Now, if you'd look on the third to

 2     the last paragraph on the first page, it defines

 3     the term, an acronym KWPI.  Do you see that?

 4          A      Yes.

 5          Q      And what does KWPI mean, just so it's

 6     clear later on?

 7                 MR. HEALY:  Just for the record, it's

 8     KWP1.

 9                 MR. AGATHEN:  KWP1, I'm sorry.

10          A      Yes.  Kansas Wind Project Number 1.

11          Q      (BY MR. AGATHEN)  Now, if you turn to

12     page 4 of the contract under section 2.3, that's

13     titled Expected Duration of KWP1.  Is that correct?

14          A      Yes.

15          Q      And in the middle of that paragraph

16     there's a sentence which states as follows:

17     "MJMEUC has certain early termination options with

18     respect to the TSA and the wind energy PPA.  In the

19     event that MJMEUC, after consultation with KWP1

20     committee, exercises any such early termination

21     option, and as a result prematurely terminates

22     KWP1, MJMEUC will render a final invoice to city

23     under section point 59, and this agreement shall be

24     terminated upon city's payment of such invoice."

25                 Is that what it says?
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 1          A     Yes, that's what it says.
 2          Q     And when you say there, "with respect
 3   to the TSA," that's the contract between MJMEUC and
 4   Grain Belt?
 5          A     Yes.
 6          Q     And the wind energy PPA is the
 7   contract between MJMEUC and Infinity Wind for the
 8   supply of energy?
 9          A     Yes, Iron Star Energy and Infinity.
10          Q     If you turn to page 5, please?  Under
11   section 3.1, there's a statement that says, "This
12   agreement is and shall remain identical to the
13   agreements between MJMEUC and all other member city
14   KWP1 participants."  Is that correct?
15          A     P1, yes.
16          Q     So all the cities that sign up for
17   capacity on the Grain Belt line will have basically
18   the same provisions as this contract has?
19          A     That's correct.  Now, I should
20   distinguish that -- well.  From the arrangement,
21   the basis for the arrangement with the MoPEP rule,
22   the circumstances are the same but the process of
23   contracting is different.
24          Q     Right.  But the contracts with the
25   additional cities would contain all these
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 1   provisions?

 2   A   That's correct.

 3   Q   Thank you. And then down at the

 4   bottom of page 5 under section 3.5, it says, "The

 5   parties expressly acknowledge that KWP1 does not

 6   include and therefore this agreement provides city

 7   no rights to use any of MJMEUC's rights under the

 8   TSA to deliver certain quantities of energy to PJM

 9   interconnection." Is that correct?

10   A   That's right.

11   MR. AGATHEN: That's all the

12   questions I have, Judge. Thank you, Mr. Kincheloe.

13   JUDGE BUSHMANN: Questions by

14   Commissioners?

15   CHAIRMAN HALL: Yeah, just a few.

16   CROSS-EXAMINATION

17   QUESTIONS BY CHAIRMAN HALL:

18   Q   Good morning.

19   A   Good morning.

20   Q   I'm a little confused. Are -- is

21   there any overlap at all between the -- the MoPEP

22   cities and the MJMEUC cities? Are those two

23   separate sets of cities?

24   A   No. All the cities that we serve are

25   MJMEUC cities. There is a subset of MoPEP.

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 1          Q       Okay.  So the subset of the MJMEUC,

 2    the MoPEP, that's 35 cities?

 3          A       Correct.

 4          Q       And there is a contract in place for

 5    60 megawatts for those 35 cities; is that correct?

 6          A       Yes.  Essentially the 35 cities

 7    constituting MoPEP have identical contracts, each

 8    of them, with MJMEUC.  And MJMEUC is obligated to

 9    supply all of their power requirements on the same

10    basis.

11               So then MoPEP cities, as a collective

12    group of their committee, will make decisions as to

13    what resources MJMEUC should acquire or contract

14    for to serve them.  And the MJMEUC will approve

15    those arrangements for whatever the portfolio of

16    supplies is to be and commit those resources

17    contracted by MJMEUC for MoPEP to the MoPEP cities.

18          Q       Okay.  And so right now there is a

19    commitment of 60 megawatts for MoPEP and then 25

20    megawatts for Kirkwood and 15 for Hannibal?

21          A       Correct.

22          Q       And you've -- and that totals 100?

23          A       Yes.

24          Q       And you've mentioned a 35 megawatt

25    negotiation with Columbia; is that correct?
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 1          A     Yes.  It's my understanding that

 2   Columbia Water & Light personnel determined that 35

 3   megawatts is what they want to serve their needs.

 4   That the process of going through the various

 5   departments, legal and finance at Columbia have not

 6   yet been completed as they haven't been presented

 7   to the council.

 8          Q     And Columbia is a MJMEUC member?

 9          A     Yes.

10          Q     And when would you expect that --

11   that would be finalized?

12          A     I, you know, the process at Columbia,

13   you know, as with the Iatan project, the Prairie

14   State Project, that Columbia also participants in,

15   they are a little slower than -- they're a larger

16   city, so more process, more people to go through, I

17   really shouldn't guess.

18          Q     Okay.  And then you mentioned one

19   megawatt with Centralia?

20          A     Yes.

21          Q     Would you anticipate additional

22   cities signing up?

23          A     Certainly.

24          Q     Would you expect the full 200 to be

25   fully subscribed at some point in time?
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 1   A   I am optimistic that would be the

 2   case, yes.

 3   **Q   And each of the cities is getting --**

 4   **up to the 200 is getting the same price?**

 5   A   Right.

 6   **Q   If for whatever reason the Grain Belt**

 7   **line is not constructed, would -- would MJMEUC**

 8   **consider continuing its contract with Illinois**

 9   **Power Marketing?**

10   A   Well, those are basically two

11   different considerations. Basically, I mean, two

12   independent decisions. I think our commitments

13   under the contracts with Grain Belt and Infinity

14   are as they are. They aren't really dependent on

15   or connected to what happens with Illinois Power

16   Marketing contract in the future.

17   Illinois Power Marketing contract

18   expires in 2021. We've basically made the judgment

19   this is the time to look for the least cost

20   alternative to, you know, pursue in view of that

21   expiration in 2021, so we've made the other --

22   we've made these arrangements.

23   **Q   I guess I'm not sure I understand.**

24   **So there is a chance that you might continue that**

25   **contract with Illinois Power regardless of what**

 1   **happens with Grain Belt?**

 2   A   Well, we would -- very unlikely we'd

 3   continue it, you know, at the current quantities or

 4   certainly on the same terms. But not the same

 5   terms I think, that's for certain. The -- the

 6   quantities would depend on our needs at that time

 7   with, you know, given by 2021 where our loads might

 8   be, whether there might be our municipalities that

 9   join the MoPEP, or other things that might happen

10   between now and then, I shouldn't prejudge what

11   those developments might be or what we might do

12   with Illinois Power Marketing, but that would be,

13   you know, a separate determination that would be

14   taken into account given the status of what other

15   arrangements we've made between now and then,

16   including these arrangements.

17   **Q   Concerning the cost savings to the**

18   **retail rate payers in your 68 cities, would that --**

19   **should I ask those questions to you or should I ask**

20   **those questions to Mr. Grotzinger?**

21   A   I think I understand the bottom

22   lines. I don't do calculations, so --

23   **Q   I'll just ask this question and we**

24   **will see how it goes. When you do your analysis**

25   **for the cost savings, are you comparing the price**

 1   **you're paying under the Grain Belt contract with**

 2   **the price you're currently paying for Illinois**

 3   **Power Marketing? Or what are you comparing it to?**

 4   A   There are at least two different sort

 5   of measurements of savings that we've offered. One

 6   of them is strictly with respect to transmission

 7   service, and that is, we have identified the wind

 8   contract here, through an RFP process, as our

 9   lowest cost energy alternative.

10   And so in terms of serving that,

11   bringing that power to our municipal utilities,

12   there is a savings in transmission costs.

13   **Q   Savings compared from what to what?**

14   A   Well, as compared to the applicable

15   SPP tariffs and associated circumstance of using

16   that transmission versus the Grain Belt Express

17   alternative.

18   And so those savings, given our best

19   estimates of circumstances at that time, is

20   probably in the range of 9 to $11 million. On

21   transmission costs. There is a different

22   calculation that is pertinent to the MoPEP service

23   and with regard to that calculation which, when we

24   look at the decision that the MoPEP committee made

25   in exercising this alternative, we're looking at

 1   the differential, the cost of the wind power -- the

 2   wind energy, the wind power, and the associated

 3   Grain Belt service and comparing that to the

 4   Illinois Power Marketing contract that will expire

 5   about the time this power becomes available through

 6   Grain Belt.

 7   Coincidentally, that savings for both

 8   power and transmission service combined, primarily

 9   for the power difference, for the MoPEP cities

10   comes to just under $11 million, as we currently

11   would expect to combine this wind power with other

12   resources to, you know, provide the equivalent

13   service to the Illinois Power Marketing contract.

14   **Q   And would you expect all those**

15   **savings to be passed through dollar for dollar to**

16   **the retail -- I mean, to residential and commercial**

17   **rate payers, and industrial I guess?**

18   A   The municipal and utilities that

19   participate in the project will receive those

20   savings dollar for dollar. So, you know, there are

21   either rate relief, there's probably also, you

22   know, some deferred maintenance.

23   We have in our utilities,

24   particularly some of the utilities that are

25   smallest in communities that are struggling

 1   economically currently and that this will help

 2   address, there's probably some deferred maintenance

 3   and other things that need to be addressed by those

 4   utilities.

 5   So I can't say to what extent those

 6   utilities and municipal governance, Boards of

 7   Aldermen and so forth, would determine to provide

 8   rate relief versus other investment in their

 9   distribution systems.

10   **Q   What is your understanding of**

11   **MJMEUC's obligations under the -- under the TSA to**

12   **purchase the -- to purchase the energy?**

13   A   Well, we have -- we have signed the

14   contract with Infinity Iron Star. We are obligated

15   to take that power and pay for it, assuming the

16   Grain Belt Express line is built and is available

17   for service. Our obligation to take service over

18   Grain Belt exists contingent only on --

19   **Q   So you don't believe that you could**

20   **-- you -- tomorrow you could sign another contract**

21   **and revoke the TSA? You feel like you have a**

22   **contractual obligation under that?**

23   A   Yes, absolutely.

24   **Q   Are there any liquidated damages or**

25   **any -- any discussion of what the damages would be**

 1   **for your -- for taking -- if you were to try to**

 2   **revoke that contract?**

 3   A   I can't say that I'm personally

 4   familiar with that right now. It's not our

 5   expectation to revoke or breach that contract and

 6   so I -- I can't say that I have in mind at the

 7   moment what damages might apply.

 8   CHAIRMAN HALL: Thank you. I have no

 9   further questions.

10   CROSS-EXAMINATION

11   QUESTIONS BY COMMISSIONER STOLL:

12   **Q   Good morning. I just have one**

13   **question.**

14   A   Yes, sir.

15   **Q   You said 10 to 11 million dollar**

16   **savings to the folks that live -- that would**

17   **receive this power, and I didn't catch over what**

18   **period. Is that over the life of contract?**

19   A   No, no, that's an annual number.

20   Those were annual numbers I was referring to, yes.

21   COMMISSIONER STOLL: Okay. Thank

22   you.

23   JUDGE BUSHMANN: Recross based on

24   bench questions?

25   Grain Belt Express?

 1   MR. ZOBRIST: No questions, Judge.

 2   JUDGE BUSHMANN: Sierra Club?

 3   MR. ROBERTSON: No questions.

 4   JUDGE BUSHMANN: Wind on the Wires?

 5   MR. BRADY: No, thank you, sir.

 6   JUDGE BUSHMANN: Infinity Wind Power?

 7   MS. PEMBERTON: No questions.

 8   JUDGE BUSHMANN: MIEC?

 9   MR. MILLS: No questions.

10   JUDGE BUSHMANN: Commission Staff?

11   MR. WILLIAMS: No, thank you.

12   JUDGE BUSHMANN: Rockies Express?

13   MS. GIBONEY: No questions, Judge.

14   JUDGE BUSHMANN: Show Me Landowners?

15   MR. LINTON: No questions.

16   JUDGE BUSHMANN: Missouri Landowners?

17   MR. AGATHEN: No questions, Your

18   Honor.

19   JUDGE BUSHMANN: Redirect by MJMEUC?

20   MR. HEALY: Just a few questions,

21   Judge. Both Staff and Chairman Hall asked about

22   the contract status, and if I could distribute

23   what's been marked as Exhibit 478 and 479.

24   (Wherein, Exhibits 478 and 479 were

25   introduced.)

```
 1                   REDIRECT EXAMINATION

 2   QUESTIONS BY MR. HEALY:

 3        Q      Mr. Kincheloe, if you could look at

 4   Exhibit 478, can you identify what that is?

 5        A      Yes.  It's a -- it's a question posed

 6   to John Grotzinger, data request basically.

 7        Q      Okay.  On the third page there is a

 8   second supplemental response, paragraph A.  Can you

 9   read what that is, please?

10        A      Read it?

11        Q      Yes.

12        A      "Please see attached final minutes

13   from the December 2016 meeting of MJMEUC."

14        Q      And are you familiar with that

15   meeting in December 2016?

16        A      Yes.

17        Q      And what those minutes reflect?

18        A      Yes.

19        Q      In the significance of this

20   Commission, what do those minutes reflect?

21        A      Those minutes would reflect the

22   commitment of the -- for the benefit of the MoPEP

23   pool, participation of the Grain Belt project, and

24   the -- yes.  60 megawatt, the 60 megawatts.

25               MR. HEALY:  Okay, I move for the
```

 1   introduction of 478.

 2   JUDGE BUSHMANN: Any objections?

 3   Hearing none, that's received.

 4   Q   (BY MR. HEALY) Mr. Kincheloe, you've

 5   been handed Exhibit 479, it's data request JG-.55

 6   and that data request requested copies of documents

 7   showing commitment from the municipalities.

 8   Can you identify Exhibit 479, what it

 9   concludes?

10   A   Yes. It's the MJMEUC contract with

11   the City of Kirkwood for participation in this

12   project.

13   Q   And is there a second contract at the

14   back of that exhibit? For another city? I think

15   if you go to the last page of that exhibit.

16   A   Yes. That would be the contract

17   executed with the City of Hannibal, same project.

18   MR. HEALY: I move for the

19   introduction of 479.

20   JUDGE BUSHMANN: Any objections?

21   Hearing none, it is received.

22   Q   (BY MR. HEALY) Mr. Agathen asked you

23   earlier about all the cities receiving the

24   benefits. Would you agree that the cities that are

25   able to implement a power supply depends on a lot

 1   of things, including existing power supply as well

 2   as to which the transmission network is connected

 3   to?

 4   A   Certainly.

 5   Q   Would that influence their decision

 6   whether to enter into additional power supply

 7   contracts?

 8   A   Yes.

 9   Q   And if I can refer you back to

10   Exhibit 479, Mr. Agathen asked you about a

11   particular provision of the contract that's all the

12   same, that's provision 2.3 of that contract. And

13   it's 2.3 is the same, both the Hannibal and

14   Kirkwood contract. Would you turn to that please?

15   A   Yes.

16   Q   The early termination provisions that

17   he referenced, that would include the out that

18   MJMEUC has if GBX does not receive the CCN from

19   this Commission; is that correct?

20   A   Yes.

21   Q   And it is your understanding it's the

22   intent of 273 that if the line is not built and

23   doesn't receive regulatory approval, that these

24   contracts would not be fulfilled; is that correct?

25   A   That's correct.

 1   MR. HEALY: No further questions.

 2   JUDGE BUSHMANN: Mr. Kincheloe, that

 3 completes your testimony, sir. You may step down.

 4   THE WITNESS: Thank you.

 5   (Witness excused.)

 6   JUDGE BUSHMANN: Ready for the next

 7 witness.

 8   MR. HEALY: Call John Grotzinger to

 9 the stand.

10   JOHN GROTZINGER,

11   having been called as a witness, was sworn

12   by the Court, upon his oath, and testified

13   as follows:

14   DIRECT EXAMINATION

15 QUESTIONS BY MR. HEALY:

16   **Q   State your name for the record,**

17 **please?**

18   A   John Grotzinger.

19   **Q   Who is your employer, Mr. Grotzinger?**

20   A   MJMEUC, otherwise known as Missouri

21 Joint Municipal Electric Utility Commission.

22   **Q   And what's your position there?**

23   A   Chief Operating Officer.

24   **Q   And did you cause rebuttal and**

25 **surrebuttal testimony to be filed in this**

 1   particular case that's been marked Exhibit 476?

 2   A   Yes, I did.

 3   Q   477?

 4   A   Yes, I did.

 5   Q   Okay. If I asked you the questions

 6   contained in Exhibits 476 and 477, would your

 7   answers be the same today as when you initially

 8   completed that testimony?

 9   A   Yes, they would.

10   (Wherein, Exhibits 476HC NP and 477HC

11   NP were introduced.)

12   MR. HEALY: I move for the

13   introduction of Exhibits 476 and 477.

14   JUDGE BUSHMANN: Any objections?

15   Hearing none, 476HC NP and 477HC NP are received.

16   MR. HEALY: Tender the witness for

17   cross.

18   JUDGE BUSHMANN: Cross by Grain Belt?

19   MR. ZOBRIST: No questions, Judge.

20   JUDGE BUSHMANN: Sierra Club?

21   (No audible response.)

22   JUDGE BUSHMANN: Wind on the Wires?

23   MR. BRADY: No questions.

24   JUDGE BUSHMANN: Infinity Wind?

25   MS. PEMBERTON: No questions, Judge.

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 1              JUDGE BUSHMANN:  MIEC?

 2              MR. MILLS:  No questions.

 3              JUDGE BUSHMANN:  Staff?

 4              MR. WILLIAMS:  Thank you.  Just a

 5    few.

 6              CROSS-EXAMINATION

 7    QUESTIONS BY MR. WILLIAMS:

 8         Q    Good morning, Mr. Grotzinger.

 9         A    Good morning.

10         Q    Do you know if any load serving

11    entities in Missouri are obtaining any wind energy

12    out of southwest Kansas, currently?

13         A    There are some that, depending on how

14    you define "southwest Kansas," both Springfield and

15    Independence do receive wind out of Kansas.  South.

16    Southern Kansas.

17         Q    And do you know when they started

18    obtaining that wind energy?

19         A    I'm not completely familiar, but it's

20    been several years ago.

21         Q    Do you know why they elected to take

22    that wind energy?

23         A    I believe it was a combination of

24    price and other reasons that made -- made sense to

25    them in their portfolio.
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 1          Q      Do you know why they haven't added

 2   additional wind to the portfolios?

 3          A      They have.

 4          Q      Since that point in time?

 5          A      Yes, they have.

 6          Q      And I assume that's wind from some

 7   other source?

 8          A      Yes.

 9          Q      And do you know why they would have

10   elected to take wind from a different source than

11   southwest Kansas?

12          A      That was an initial entry into the

13   market for them.  They have continued to expand

14   that.

15          Q      You're talking about taking wind in

16   general when you say that?

17          A      Yes.  Not necessarily from that

18   location.

19          Q      What I'm trying to get at is do you

20   know why that location would not be a location they

21   continued to source from?

22          A      It has significant congestion in that

23   area in spite of being a very good wind resource.

24          Q      When you say "congestion," you're

25   talking about transmission availability?
```

 1   A   Transmission limitations that are

 2   modeled in the market with congestion as a method

 3   of relief with the new markets.

 4   Q   **And from where are -- well, I'll**

 5   **start with Springfield. Do you know where it's**

 6   **subsequently getting its wind energy?**

 7   A   I believe it's a wind farm in

 8   Oklahoma.

 9   Q   **And Independence, do you know where**

10   **it's getting its wind from?**

11   A   Northern Kansas.

12   MR. WILLIAMS: No further questions.

13   Thank you.

14   JUDGE BUSHMANN: Cross by Rockies

15   Express?

16   MS. GIBONEY: No questions, Judge.

17   JUDGE BUSHMANN: Show Me Landowners?

18   MR. LINTON: Thank you, Judge.

19   CROSS-EXAMINATION

20   QUESTIONS BY MR. LINTON:

21   Q   **Good morning, Mr. Grotzinger.**

22   A   Good morning.

23   Q   **If the Commission were to disapprove**

24   **this application, that wouldn't keep MJMEUC from**

25   **being able to get its resources, get its supply to**

1   meet its reserve obligation and its load?

2   A   It would not prevent it, but we would

3   expect that it would likely raise the cost of being

4   able to supply that.

5   Q   At page 5, line 16 of your rebuttal

6   testimony, you assume congestion prices in the

7   range of $2 per megawatt to $10 per megawatt. Is

8   that correct?

9   A   Yes.

10   Q   And you also, you also indicate on

11   line 23 of that same page that congestion prices

12   are hard to predict?

13   A   Yes.

14   Q   And would you say that they're harder

15   to predict the further you go out into the future?

16   A   Yes.

17   Q   And why is that?

18   A   The compilation of factors.

19   Additional resources being added, transmission

20   improvements being made, other units being retired

21   in other regions. So there's a variety of reasons.

22   Q   And the transmission components that

23   you talk about would be the MVP from MISO?

24   A   In the MISO footprint, yes.

25   Q   The priority projects from SPP?

 1   A   Those would be -- both of those would

 2   be included in the relative regions, yes.

 3   **Q   And then the possibility of an**

 4   **interregional transmission project that FERC Order**

 5   **1000 might facilitate?**

 6   A   That could be, depending on your time

 7   frame, if you're talking ten years, but it does

 8   take a significant lead time for much of this

 9   project.

10   **Q   Thank you. Now your range of $2 to**

11   **$10 per megawatt, that's a pretty broad range,**

12   **isn't it?**

13   A   Yes.

14   **Q   If we look at the midpoint of that**

15   **range being $6 per megawatt, the range is larger**

16   **than -- than the actual estimate of the congestion**

17   **charge; correct?**

18   A   The range is, the high end of the

19   range is larger.

20   **Q   But the range itself is 2 to 10.**

21   **That's 8. And the actual midpoint is 6.**

22   A   Yes.

23   **Q   So the range is larger than the**

24   **actual estimate.**

25   A   Yes.

```
 1           Q      Okay.  So take a look at your JG- --
 2    Schedule JG-3, please.  That's your comparison
 3    between Grain Belt project versus SPP to MISO.
 4           A      I'm looking for that schedule.
 5           Q      Okay.
 6           A      Okay.  Got it.  Yes.
 7           Q      So your -- your columns, and the
 8    columns starting out with the term to the left,
 9    approximately, your columns there are your
10    assumption of the SPP transmission rate?
11           A      That's the second column, yes.
12           Q      And the capacity factor of 50 percent
13    for the regeneration, I assume?
14           A      That's the conservative assumption I
15    made.
16           Q      Okay.  And then your contract price
17    for your assumed wind generation rate at that time?
18           A      Right.
19           Q      The Infinity Wind contract is
20    different from that; correct?
21           A      That would approximate the delivered
22    price.
23           Q      Okay.  And then going across, those
24    are your congestion prices, those are your 2 to 10
25    that you identify in your rebuttal testimony;
```

 1   correct?

 2   A   That's the first of the -- each of

 3   those rows, yes.

 4   Q   Then on the left-hand side you come

 5   up with four scenarios for transmission through

 6   SPP; is that correct?

 7   A   That's correct.

 8   Q   Okay. And then you come up with two

 9   scenarios for Grain Belt Express project for the

10   cost of that; right?

11   A   That's correct, yes.

12   Q   And then finally in the red down at

13   the bottom you calculate the difference between the

14   various scenarios?

15   A   Yes.

16   Q   Okay. So if we go on across and just

17   take the example in column number 2, or column for

18   congestion with $2 per megawatt, what you do there

19   is you multiply your congestion charge of $2 per

20   megawatt hour times your energy generated megawatt

21   hours to come up with the five twenty-five six

22   hundred; is that right?

23   A   Yes.

24   Q   And then you add that to your

25   transmission charge and your energy charge; is that

1   right? To come up with the number immediately

2   below the congestion charge?

3   A   The energy losses charge, yes. In

4   addition to that, yes.

5   Q   And that gets you your SPP cost and

6   if you go on down to and compare that calculation

7   with the first one under Grain Belt Express of 60

8   megawatts TSA Grain Belt cost, if you subtract the

9   3.4 million -- no excuse me. Strike that.

10   If you subtract the $1,020,000 from

11   the $2.7 million above in that column, you come up

12   with your difference, your cost saving; is that

13   right?

14   A   Yes, for the 60 megawatt example,

15   yes.

16   Q   Okay. Now, turn to your Schedule

17   JG-5.

18   A   Yes, sir.

19   Q   Strike that. JG-6, I'm sorry. What

20   was the congestion factor you calculated in JG-6?

21   A   It depended on -- it depended on the

22   site.

23   Q   For SPP?

24   A   Excuse me, you're looking at JG-6,

25   comparing the different wind resources to Grain

```
 1   Belt?

 2            Q      Right.  What was the congestion adder

 3   you had for SPP in JG-6?

 4            A      Oh, in this one I assumed, for the

 5   point to get out of SPP, the congestion of $2.

 6            Q      Okay.  What would happen to your

 7   calculation in Schedule JG-3 if you included a

 8   column with 1 as your congestion charge?

 9            A      That would lower it significantly,

10   but that would essentially limit it to the

11   congestion essentially at the interface between SPP

12   and MISO, or very close to it.

13            Q      Now what was your basis for

14   concluding that the range from 2 to 10 was a

15   reasonable range for congestion?

16            A      Historical information and

17   experience.

18            Q      What historical information?

19            A      Pulling from the SPP resources there

20   as far as congestion from a variety of points

21   within the SPP footprint.

22                   MR. LINTON:  Your Honor, I previously

23   filed what has been marked as Exhibit 406HC, and

24   I've given it to the court reporter.

25                   JUDGE BUSHMANN:  Very good.
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 1   (Wherein, Exhibit 406 was

 2   introduced.)

 3   MR. LINTON: I've also made copies of

 4   the relevant pages that I'd like to ask the witness

 5   some questions on and I've already provided a copy

 6   of that to opposing counsel.

 7   JUDGE BUSHMANN: Very good.

 8   MR. HEALY: I would ask if the

 9   questions are going to be HC in nature, we go in

10   camera.

11   MR. LINTON: I would rely on you to

12   make that call, but I would assume so myself.

13   MR. HEALY: Judge, since the exhibit

14   is HC in its entirety, if there's going to be

15   questions on it, I would ask that it go in camera.

16   JUDGE BUSHMANN: All right. We're

17   going into closed session. Anybody in the audience

18   that's not authorized to listen to highly

19   confidential information will need to step outside

20   for a few minutes.

21   (REPORTER'S NOTE: At this point, an

22   in-camera session was held, which is contained in

23   Volume 17 - Pages 1019 through 1039.)

24

25

 1   (REPORTER'S NOTE: Back in open

 2   session.)

 3   JUDGE BUSHMANN: Back on the record

 4   and back in open session. And ready for

 5   cross-examination by Missouri Landowners.

 6   MR. AGATHEN: Thank you, Judge.

 7   CROSS-EXAMINATION

 8   QUESTIONS BY MR. AGATHEN:

 9   **Q   Good morning, Mr. Grotzinger.**

10   A   Good morning.

11   **Q   Grain Belt first approached you at**

12   **least two to three years ago about buying capacity**

13   **on their line, did they not?**

14   A   I don't know that I personally had

15   contact. I think it was late '15 that I personally

16   was involved.

17   **Q   Right. But some -- they contacted**

18   **someone earlier than that?**

19   A   Yes.

20   **Q   All right. And as Mr. Kincheloe just**

21   **testified, when they first approached you about**

22   **buying capacity on the line, you declined to buy**

23   **any; is that correct?**

24   A   That's correct.

25   **Q   At about the time that Grain Belt**

 1   **initiated their first open solicitation for bids in**

 2   **early 2015, they approached you again, did they**

 3   **not?**

 4   A   I believe they approached someone,

 5   yes.

 6   Q   **It wouldn't have cost you a dime to**

 7   **submit a bid for that first open solicitation,**

 8   **would it not?**

 9   A   That's my understanding.

10   Q   **And submitting a bid would not have**

11   **committed you to buy any capacity at all, would it?**

12   A   That's my understanding.

13   Q   **Basically risk free?**

14   A   Yes.

15   Q   **But MJMEUC decided it wasn't**

16   **interested enough in buying capacity on the Grain**

17   **Belt line to even submit a bid in that early 2015**

18   **open solicitation; correct?**

19   A   That is correct. We were engaged --

20   engaging in the IRP and really wanted to have some

21   additional results from that process before we

22   expanded.

23   Q   **So then after that first open**

24   **solicitation was completed and you hadn't bid, they**

25   **came back again; right?**

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 1          A      Yes.

 2          Q      And they were also contacting

 3  individual municipalities in an attempt to sign

 4  them up, were they not?

 5          A      That's my understanding, yes.

 6          Q      And asking basically those individual

 7  municipalities to try and support Grain Belt

 8  through MJMEUC?

 9          A      I think there was different requests

10  but I think it was consistent that they were

11  looking for support from municipalities.

12          Q      Let's go back to late -- late in the

13  year of 2015, say, November of 2015.  At that point

14  was it apparent to you that Grain Belt thought it

15  was important to sign up a utility in Missouri

16  before they went back to this Commission?

17                 MR. HEALY:  Objection, Judge, that's

18  calling for speculation.  He doesn't know what

19  Grain Belt thought or knew.

20                 JUDGE BUSHMANN:  Sustained.

21          Q      (BY MR. AGATHEN)  Mr. Grotzinger, I'm

22  going to hand you a copy of a data request we sent

23  to you and your response to it which includes a

24  series of e-mails.  These things are always put in

25  reverse order, unfortunately, but if we look at the
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 1    first e-mail the bottom of page 2, it was sent from

 2    Chad Davis on October 29, 2015.  Is that correct?

 3          A     Yes.

 4          Q     Who is Chad Davis?

 5          A     He was the utility director at

 6    Trenton, Missouri.

 7          Q     And it was sent to you and to Mr.

 8    Kincheloe and Floyd Glizow, G-l-i-z-o-w (sic)?

 9          A     Floyd Gilzow, yes.

10          Q     And who is he?

11          A     He was formerly our VP of member and

12    government relations.

13          Q     And the e-mail says in part, looking

14    at the first paragraph, quote, "Clean Line energy

15    contacted me yesterday to request getting together

16    to talk about the Grain Belt Express project.  I

17    get the feel they are contacting a lot of cities in

18    northern Missouri.  Not sure but I assume they are

19    focusing on those with electric operations."

20    Correct?

21          A     Yes.

22          Q     And then down the bottom, last

23    paragraph, he says, "I also wanted to pass this

24    alert along in case you may start getting calls

25    from other cities, trying to figure out why they're
```

 1   being called about this project," et cetera.

 2   Correct?

 3   A   Yes.

 4   Q   The second e-mail right above that is

 5   from Mr. Gilzow dated October 29, 2015, sent to Mr.

 6   Chad Davis and yourself and Mr. Kincheloe; right?

 7   A   Yes.

 8   Q   And he says, "Chad, thanks. As you

 9   are probably aware, Clean Line lost an important

10   vote before the PSC by a narrow margin in the last

11   few months to allow their project to proceed. I

12   suspect they will be attempting to line up support

13   for the next attempt. Would love to know what they

14   present and what they are asking you to do." Is

15   that correct?

16   A   Yes.

17   Q   And then the next e-mail, if you look

18   over at the other page, it indicates that it was

19   sent from you on October 29, 2015, to Mr. Gilzow,

20   to Chad Davis, and to Duncan Kincheloe; correct?

21   A   Yes.

22   Q   And looking back at the contents of

23   the e-mail, you said, "Chad," quote, "to pile on

24   what Floyd said, they are clearly looking for

25   support after losing vote. What they don't get is

```
 1    that the Missouri munis are already engaged in wind
 2    and other renewables.  They don't really add value
 3    for Missouri since most get value on east and skips
 4    Missouri.  They are not willing to share that value
 5    of transmission on east (I asked).  Not that it
 6    would justify commitment, but that is academic
 7    since they are not willing to include.  They are
 8    not fixing transmission issues, only trying to
 9    bypass responsibility and leave others with the
10    cost of underlying transmission system."  Signed,
11    "John."  Is that correct?
12        A     Yes.  There was some additional
13    information attached to this.  I don't see in what
14    -- what you've given me.
15        Q     Well, that's because we weren't given
16    the additional information.
17              And then finally, there is one other
18    e-mail from Mr. Davis dated November 9, 2015.  You
19    see that?
20        A     Yes.
21        Q     And he says, "While Clean Line is
22    definitely trying to get local support in an effort
23    to get PSC approval in Missouri, attached is some
24    information they provided today.  They did not say
25    any of this is confidential but I assume we want to
```

1   keep it close to the vest. With that said, though,

2   I did also mention that I think they are to try to

3   get support for the PSC from communities like

4   Trenton and MoPEP membership. The most viable path

5   seems to go through MJMEUC and not individual

6   cities since very few individual cities would have

7   the ability to tap into this resource directly or

8   in a cost effective manner unless they were

9   presumably very close to the converter station

10   where the tie would be fairly short, either direct

11   or through another system. I think they have

12   definitely realized the complexity of city electric

13   supplies at MJMEUC and, therefore, interest in the

14   project is a lot more complicated than they had

15   anticipated." Is that correct?

16   A   Yes.

17   Q   Thank you.

18   A   Trenton -- Trenton is a member of

19   MoPEP, I might clarify that.

20   Q   Sure. So as late as November of 2015

21   you saw no need to buy capacity on the Grain Belt

22   line; right?

23   A   Based on the information I had

24   available at that time as to what they were

25   offering, and that gets to the page I referenced of

 1   the information they were indicating for pricing

 2   and availability and so forth.

 3   **Q   You saw no need based on what they**

 4   **were telling you?**

 5   A   Based on that information.

 6   **Q   From Grain Belt.**

 7   A   From -- that I received from Chad

 8   that I believe was from Grain Belt.

 9   **Q   Thank you. Grain Belt opened up a**

10   **second round, or a second window of bidding in**

11   **February of 2016, did they not?**

12   A   Yes.

13   **Q   Had you come to at least a tentative**

14   **terms on a deal with Grain Belt even before they**

15   **opened up that second round of bidding in February**

16   **of 2016?**

17   A   We had had some discussions. I'm not

18   sure I would go so far as your description. But we

19   had had some discussions and they had provided some

20   additional information, which, frankly, did change

21   my perspective from what I offered to Chad.

22   **Q   And had you come to at least**

23   **tentative terms on any of the provisions in the**

24   **contract?**

25   MR. HEALY: Object to that, Judge,

 1   it's already been asked, Mr. Grotzinger answered it

 2   to his ability.

 3   MR. AGATHEN: I'll remove the

 4   question.

 5   JUDGE BUSHMANN: All right.

 6   **Q   (BY MR. AGATHEN) On a different**

 7   **subject, MJMEUC currently has a contract with an**

 8   **Illinois Power Marketer which is set to expire in**

 9   **the year 2021; correct?**

10   A   Yes.

11   **Q   What month does that contract expire?**

12   A   It expires the end of May.

13   **Q   And is that for 100 megawatts?**

14   A   Correct.

15   **Q   And that basically supplies the power**

16   **for the MoPEP group; is that correct?**

17   A   That contract is allocated to MoPEP,

18   yes.

19   **Q   Is that a full requirements contract?**

20   A   No, it is not.

21   **Q   The peak load of MoPEP is about 60**

22   **megawatts, is it not?**

23   A   No.

24   **Q   What is the peak?**

25   A   The all-time peak is 572 megawatts.

```
 1          Q     Oh, I'm sorry.  So that Illinois

 2   contract supplies a portion of the requirements?

 3          A     Correct.

 4          Q     At some point you realized you'd need

 5   to start seriously looking for a means of replacing

 6   that Illinois contract; right?

 7          A     Yes.

 8          Q     And eventually you selected on the

 9   Grain Belt line as a means of replacing that

10   contract?

11          A     As a portion of the replacement for

12   that contract, yes.

13          Q     When you signed up with Grain Belt to

14   replace the Illinois contract, what was your next

15   best alternative as far as pricing went?

16          A     Well, it's a portfolio.  I mean,

17   that's -- it was not a single source that we were

18   considering.

19          Q     Well, what was the next best

20   alternative to Grain Belt?

21          A     From the, if you're -- I'm not sure I

22   understand your perspective.

23          Q     Well, there are various sources

24   available to you at any point to supply power for

25   the MoPEP group; right?
```

```
 1          A      Yes.
 2          Q      And I'm asking what was the next best
 3   alternative among those sources to the Grain Belt
 4   line?
 5          A      We, to replace the IPM contract, we
 6   were looking at a portfolio of resources to replace
 7   that, not a single source supply.
 8          Q      Mr. Grotzinger, I have handed you
 9   copies of two data requests and your responses to
10   those data requests.  Do you recognize those?
11          A      Yes.
12          Q      The first one, which is data request
13   JG.32, the question was, "At the time you signed
14   the recent TSA and PPA contracts with Grain Belt
15   and Infinity, what was your next best alternative
16   from a pricing standpoint to replacing the Illinois
17   Power Marketing contract?"  Is that the question?
18          A      Yes.
19          Q      And your response was, "We had not
20   made a request for proposals to replace the
21   Illinois Power Marketing contract."  Is that
22   correct?
23          A      That's correct.  We have not made a
24   request for proposals focused solely on replacing
25   the Illinois Power Marketing contract.
```

```
 1          Q      And then the next document, which is

 2    MJM.17, says, "Please provide a copy of all

 3    documents, correspondence, and communications in

 4    which MJMEUC submitted a request for bids or a

 5    similar invitation for proposals for power which

 6    could be utilized in whole or in part in lieu of

 7    the power expected to be delivered over the Grain

 8    Belt project."

 9                 Do you see that?

10         A      Yes.

11         Q      And your response was?

12         A      It reads, "None."

13         Q      Thank you.  Speaking of Infinity, you

14    have the right under section 2.1B of your contract

15    with them to cancel the contract if for some reason

16    the Grain Belt project is canceled; is that

17    correct?

18         A      That's correct.  Given the exposure

19    for the CCN and the potential, we wanted to include

20    that, yes.

21         Q      Could you go, please, to Schedule

22    JG-3 of your rebuttal testimony?

23         A      I haven't found it yet, I'm sorry.

24    Okay.

25         Q      First question, you have a series in
```

 1   the columns on the right of congestion costs;

 2   correct?

 3   A   Yes.

 4   Q   What point -- from what point to what

 5   point are those congestion costs being calculated

 6   or estimated?

 7   A   Those are estimating from a -- from a

 8   wind source somewhere within SPP to the SPP MISO

 9   interface.

10   Q   Okay. So it doesn't include any

11   congestion cost for MISO?

12   A   That's correct.

13   Q   In general, Schedule JG-3 is a

14   comparison on a per megawatt basis, per megawatt

15   hour basis, of the cost of the Grain Belt capacity

16   versus the capacity or the cost of bringing in

17   Kansas wind over the SPP system; is that correct?

18   A   Yes.

19   Q   And for using the SPP system, you

20   include a range of estimated congestion costs

21   between $2 and $10. Correct?

22   A   Yes.

23   Q   Now, if you'd turn please to page 5

24   of your rebuttal testimony.

25   A   Yes, sir.

```
 1          Q      You say that, at lines 3 to 4, the

 2   use of the Grain Belt option will save your

 3   customers approximately $10 million in transmission

 4   costs.  Is that right?

 5          A      Yes.

 6          Q      And the figure at Schedule JG-3 which

 7   comes closest to that 10 million assumes congestion

 8   costs of about $6 per megawatt hour; correct?

 9          A      Yes, for the full 200 megawatts, yes.

10          Q      Right.  That cost would be about 12.7

11   million?

12          A      Yes.

13          Q      I'm now going to show you a copy of

14   our data request number MJM-13.  Do you have a copy

15   of that document in front of you?

16          A      Yes, sir.

17          Q      This asked you for a copy of the

18   study referenced by Mr. Lawlor in which he said

19   that MJMEUC estimated that it would save $10

20   million with the Grain Belt contract versus the

21   cost of the Illinois contract.  Correct?

22          A      Could you repeat the question?

23          Q      Sure.  The question is, with

24   reference to page 3, line 16 to 18 of the direct

25   testimony of Mr. Lawlor, "Please provide a copy of
```

 1   the studies or analyses, including work papers in

 2   which MJMEUC estimated the $10 million in annual

 3   savings to its members," which was the Grain Belt

 4   contract vis-a-vis the Illinois contract.

 5   A   I'm not sure I understand your

 6   reference to the Illinois contract.

 7   Q   That was in Mr. Lawlor's testimony.

 8   He said, the lines I'm quoting, that your $10

 9   million savings was the estimate provided to him by

10   MJMEUC for the cost of the Grain Belt contract

11   vis-a-vis the Illinois contract. And then I've

12   asked in this data request for copies of the

13   studies which support his statement.

14   A   I'm not as familiar to the direct

15   reference to the Illinois contract. The numbers we

16   had discussed was in transmission savings for the

17   SPP, and that's what I supplied here.

18   Q   Right. You did not supply us with

19   anything to do with the Illinois contract in answer

20   to this data request, did you?

21   A   No. I was referring to the savings

22   that we referenced to the $10 million.

23   Q   I understand, but that's not what Mr.

24   Lawlor was talking about, was it?

25   MR. HEALY: Objection, Judge, I don't

 1   think Mr. Grotzinger knows what Mr. Lawlor was

 2   thinking. Speculation.

 3   JUDGE BUSHMANN: Sustained.

 4   Q   (BY MR. AGATHEN) What do you show on

 5   the attachment to our data request MJM-13 to be the

 6   most probable level of congestion costs in terms of

 7   dollars per megawatt hour?

 8   A   I think that was underlined, the $2,

 9   there are several differences between this and the

10   other exhibits you were discussing.

11   Q   Right. So it's $2; right?

12   A   That was the assumption here.

13   Q   Thank you. Did you ever send us a

14   copy of the comparison -- strike that -- of the

15   savings between your contract with Grain Belt

16   vis-a-vis the Illinois coal contract?

17   A   For the MoPEP group?

18   Q   Yes.

19   A   There is an exhibit that references

20   that, yes.

21   Q   Did you ever send us a copy of the

22   work papers in response to any of our data

23   requests?

24   A   I don't think that was in response to

25   a data request.

```
 1          Q       Okay.  Thank you.  I'm handing you

 2    now a copy of a data request MJM-15 and ask if you

 3    recognize that?

 4          A       Yes.

 5          Q       And our question to you was, quote,

 6    "Please provide a copy of all studies and analyses

 7    compiled by or available to MJMEUC comparing the

 8    projected cost to MJMEUC members of electricity

 9    from the project versus the projected cost to

10    MJMEUC members of electricity from other available

11    or potentially available sources."  Is that

12    correct?

13          A       Yes.

14          Q       And your answer was, "Please see

15    response to MJM.13," which we've already discussed;

16    right?

17          A       Right.

18          Q       And you went on --

19          A       The Leidos report, yes.

20          Q       It says, "Please see response to

21    MJM-13, which was incorporated here by reference,

22    and the attached highly confidential document."

23    Correct?

24          A       Yes.

25          Q       And what was the highly confidential
```

 1   document?

 2   A   Oh, the regional market report.

 3   Their projections of market prices.

 4   Q   **Which was eventually submitted by you**

 5   **in your testimony; correct?**

 6   A   Yes. I believe -- was the date

 7   November 7 on that, as I recall.

 8   Q   **The date of the data request was**

 9   **November 7, 2016. Correct?**

10   A   Yes. Yes. That's what we had

11   available at that time, yes.

12   Q   **And just so it's clear, MJM.13, which**

13   **is referenced in that last data request, that was a**

14   **comparison of the cost of the Grain Belt power**

15   **versus your estimate of the cost to bring in Kansas**

16   **power over the AC system; right?**

17   A   I don't recall it, are you talking

18   the -- I'm sorry. I lost track of which data

19   request we're talking about here. 13?

20   Q   **Yes.**

21   A   Concerning the savings to our

22   members. Yes. That was -- the savings comparison

23   was for SPP transmission savings.

24   Q   **In other words, Kansas wind brought**

25   **into Missouri.**

```
 1          A      (Witness nods.)

 2          Q      You have five different scenarios as

 3   Schedule JG-3 for the assumed congestion costs;

 4   correct?

 5          A      Yes.

 6          Q      Are you familiar with the testimony

 7   of Mr. Goggin in this case where he talks about the

 8   ability to hedge congestion costs using, quote,

 9   financial transmission rights, end quote?

10          A      I am not familiar with the testimony,

11   no.

12          Q      What are financial transmission

13   rights?

14          A      The ability to secure those within

15   MISO for a hedging mechanism for transmission that

16   you're paid for, paid for or paying for,

17   differences in prices between two different

18   locations.

19          Q      Did you do an analysis of how much of

20   the congestion costs shown on your Schedule 3 could

21   have been hedged with financial transmission

22   rights?

23          A      Financial transmission rights are a

24   MISO mechanism, and I was comparing SPP, so there's

25   no opportunity.
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 1          Q      Are there no similar means of hedging
 2    in SPP?
 3          A      There is something similar.
 4          Q      Did you do an analysis of that
 5    something similar as to how much it could save in
 6    congestion costs?
 7          A      I did not because those require
 8    purchase, which you're usually, if you're just
 9    buying those resources, then there's usually an
10    analysis done by other parties as to what the value
11    is when they sell those.
12          Q      So you didn't make any analysis?
13          A      I did not.
14          Q      On your Schedule 3, looking at the
15    bottom row under the $6 congestion costs, you have
16    a figure of about $9.2 million in savings, $9.3
17    million in savings; correct?
18          A      Yes.
19          Q      And that assumes that you get the
20    discounted rate provided for in your contract with
21    Grain Belt; right?
22          A      Yes.
23          Q      Do you know what the Grain Belt
24    normal rate is expected to be for the service from
25    Kansas to Missouri, as opposed to your discounted
```

     1   rate?

     2   A   I've heard it referenced in this

     3   case, yes.

     4   Q   How about $5,670 per megawatt per

     5   month; does that sound correct?

     6   A   That sounds like the right number.

     7   Q   And that would equal 68,004 per

     8   megawatt per year. Does that sound right?

     9   A   I haven't done that math. Subject to

    10   check, I'll --

    11   MR. HEALY: Judge, I'm sure Mr.

    12   Agathen is doing the math correctly, but I'm just

    13   objecting to relevance. I'm not sure what this is

    14   relevant to lead to for determination by the

    15   Commission.

    16   JUDGE BUSHMANN: Your response?

    17   MR. AGATHEN: It's going to show the

    18   impact of the totally discounted rate vis-a-vis

    19   what would normally be applied by Grain Belt.

    20   JUDGE BUSHMANN: Overruled.

    21   A   I don't have a reason to disagree

    22   with your math.

    23   Q   (BY MR. AGATHEN) Okay. And for 200

    24   megawatts, then the cost under the normal rate

    25   would be about 13.6 million; does that sound right?

```
 1          A     Again, I have no reason to disagree

 2   with your math.

 3          Q     And under the column of the $6

 4   congestion cost, the cost for bringing in the 200

 5   megawatts over the SBC system -- SPP system is only

 6   12.7 million; correct?

 7          A     Yes.  That's what I was using, yes.

 8          Q     So assuming my math was right, under

 9   the normal rate, the cost of transmission for the

10   Grain Belt option would be nearly a million dollars

11   higher than your best estimate of importing 200

12   megawatts over the SPP system; is that correct?

13          A     Based on the information you relayed,

14   yes.

15          Q     Could you turn please to page 5 of

16   your rebuttal?  Are you there?

17          A     Yes.

18          Q     At lines 13 to 14 you testify that in

19   developing your Schedule JG-3, you assumed a

20   capacity factor of only 50 percent for the

21   southwest Kansas wind farm; correct?

22          A     Yes.

23          Q     And as you testified, that was based

24   upon your past knowledge and experience of wind

25   farms in Kansas; right?
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 1          A      Yes.

 2          Q      Are you aware of the fact that Mr.

 3    Berry used a capacity factor of 55 percent in its

 4    levelized cost of energy analysis?

 5          A      I am aware of that, yes.

 6          Q      So about 10 percent higher than your

 7    figure of 50 percent; right?

 8          A      Right.  Mine was intended to be a

 9    conservative average of wind farms in that region

10    that I had exposure to.

11          Q      Did someone at Grain Belt, by any

12    chance, ask you to insert the next sentence into

13    your testimony which says, "That capacity factor

14    may increase in the future due to improved

15    technology"?

16          A      They did not ask me to insert that.

17    I'm aware of technology improvements that are

18    continuing to increase -- increase the capacity

19    factor and efficiency of winter.

20                 (Discussion off the record.)

21          Q      (BY MR. AGATHEN)  I'm handing you a

22    copy of our data request JG-11 dated February 6,

23    2017, and it was sent -- or the response was sent

24    from you; correct?

25          A      Yes.
```

```
 1          Q      And the question is, at page 5 of

 2   your testimony, lines 15 to 16, you state that,

 3   quote, "These capacity factors may increase in the

 4   future due to improved technology," end quote.  Was

 5   this statement or something similar thereto

 6   included at the suggestion of someone at Grain

 7   Belt?  And what was your response?

 8          A      Yes, it was referenced that they did

 9   suggest to remind me of the potential improvements.

10          Q      So they suggested adding that

11   additional sentence?

12          A      Well, they referenced that there

13   would be additional improvements, yes.

14          Q      Thank you.  Just so the record is

15   clear, your response was, "Without waiving any

16   objection, yes."  Correct?

17          A      Yes.

18          Q      Do you know who at Grain Belt made

19   suggestion to you?

20          A      I don't recall.

21          Q      Would you turn please to page 6 of

22   your rebuttal testimony?

23          A      Okay.

24          Q      Are you there?

25          A      Yes.
```

 1   Q   At lines 3 to 4 you state that,

 2   "Schedule 3 does not reflect any future rate

 3   increases in SPP." Is that correct?

 4   A   That's correct.

 5   Q   And that those costs are expected to

 6   increase over the next 20 years?

 7   A   Correct.

 8   Q   I've got two questions about that

 9   statement. First, isn't it true that Schedule 3

10   also does not reflect any increases in Grain Belt

11   rate?

12   A   Yes. Neither of those show

13   increasing rates.

14   Q   And the Grain Belt rates do increase

15   by 2 percent every year?

16   A   Yes, our contract does increase at 2

17   percent.

18   Q   And second, to the extent that the

19   increase in the SPP rates are for additions to

20   their transmission system, isn't it true that those

21   cost increases should lead to decreases in the

22   congestion costs that you were complaining about?

23   A   There is other factors that increase

24   the costs within SPP. In addition to improvements.

25   And improvements can have the impact of decreasing

 1 congestion costs, or not, depending on overall

 2 changes to the -- to the grid.

 3   **Q   I hand you another copy of a data**

 4 **request and your response. Do you recognize that?**

 5   A   Yes.

 6   **Q   And the question was, with reference**

 7 **to page 6, lines 4 to 8 of your testimony, "If the**

 8 **SPP transmission system expands in the future,**

 9 **would you expect that to lead to a decrease in**

10 **congestion costs on that system? If not, please**

11 **explain."**

12   **And your answer was, subject to an**

13 **objection, "Congestion costs could decrease if**

14 **further investments in the SPP system, transmission**

15 **system are made, but whether the additional**

16 **investment costs would be less or more than**

17 **possible congestion cost savings would be**

18 **speculative and on a case-by-case basis." Is that**

19 **correct?**

20   A   Yes.

21   **Q   So you're saying you couldn't tell?**

22   A   Not completely.

23   **Q   Well, you're saying you couldn't**

24 **tell; right?**

25   A   I couldn't tell what the direction

 1   would be entirely.

 2   **Q   On a different subject, would you**

 3   **turn, please, to page 7 of your rebuttal testimony?**

 4   A   Okay. I'm there.

 5   **Q   Are you there?**

 6   A   Yes.

 7   **Q   Beginning at line 8, you state that**

 8   **you have examined other options to supply the 60**

 9   **megawatts needed by your MoPEP group; correct?**

10   A   Yes.

11   **Q   Those are shown at Schedule JG-6?**

12   A   Yes.

13   **Q   And you provide a calculation of the**

14   **cost of the Grain Belt option and then you show the**

15   **cost of seven other options; right?**

16   A   I believe that's right.

17   **Q   Is it true these other options were**

18   **all evaluated after the fact, after you had already**

19   **signed the contract with Grain Belt?**

20   A   For this comparison, for the MoPEP

21   savings?

22   **Q   Yes.**

23   A   Yes.

24   **Q   And is it true that all of the**

25   **alternative sources of supply that you show at that**

 1   **schedule show only the cost of energy, not the cost**

 2   **of transmission?**

 3   A   I am not looking at that schedule but

 4   I believe it includes both.

 5   Q   **We're talking about JG-6?**

 6   A   Those include both capacity and

 7   energy.

 8   Q   **So they include the cost of**

 9   **transmission?**

10   A   No. They do not.

11   Q   **Okay. Thank you.**

12   A   Well, let me rephrase that. With a

13   couple of exceptions.

14   Q   **So some do and some don't?**

15   A   The -- let me try to make this clear.

16   The SPP options include transmission costs to be

17   able to deliver it into MISO. Those connected to

18   MISO or presumed to connect to MISO, do not, since

19   I was referencing this for load that's being served

20   within MISO. In which case those loads could use

21   the same network transmission service -- excuse me,

22   service in any case.

23   Q   **So just to be clear, the alternatives**

24   **listed under MISO do not include transmission, and**

25   **the two under SPP do include transmission?**

 1   A   Right. They do not include a

 2   separate transmission beyond the network service

 3   that's already embedded to the serve load.

 4   Q   **Gotcha. One option you show on your**

 5   **Schedule JG-6 is for Crystal Lake II; is that**

 6   **correct?**

 7   A   That's right.

 8   Q   **That's a wind farm in Iowa?**

 9   A   Yes, it is.

10   Q   **Is there also a Crystal Lake III wind**

11   **project in Iowa?**

12   A   I believe there is.

13   Q   **And in fact, the City of Columbia**

14   **recently signed a contract to take energy from**

15   **Crystal Lake III, did they not?**

16   A   Yes.

17   Q   **For 45 megawatts?**

18   A   I am not certain of the quantity, but

19   yes.

20   Q   **And they're only buying 25 megawatts**

21   **from Grain Belt; right?**

22   A   35.

23   Q   **25?**

24   A   Columbia's -- discussions with

25   Columbia indicate their interest at 35 megawatts.

```
 1        Q     35.   Thank you.   And as shown on your

 2   Schedule JG-6, the cost of energy from Crystal Lake

 3   II is $22 per megawatt hour; correct?

 4        A     Yes.   In -- erroneously, that

 5   probably should have been labeled Crystal Lake III

 6   -- or could have been labeled Crystal Lake III.

 7        Q     Well, the cost of energy from the

 8   Crystal Lake III project is only $20.75, is it not?

 9        A     I don't believe so.   And understand

10   I'm in reference to the year 2021.

11        Q     Handing you a copy of a data request

12   JG-54, which you sent to us March 3, 2017; is that

13   correct?

14        A     Yes.

15        Q     And the question is, how does the

16   price of the Crystal Lake II PPA included in your

17   Schedule JG-6 compare to the price of the City of

18   Columbia wind contract referred to in data request

19   JG-37; is that correct?

20        A     Yes.

21        Q     And your response was the energy

22   costs in the year 2016 are $22 for Crystal Lake II

23   versus $20.75 in the year 2021 for Crystal Lake

24   III.   Is that correct?

25        A     That's the beginning of 2021, yes.
```

 1   Q   You were aware of the City of

 2   Columbia contract with Crystal Lake III when you

 3   prepared your Schedule JG-6 in this case, were you

 4   not?

 5   A   Generally.

 6   Q   Were you aware of the price?

 7   A   I believe I had seen the price. It

 8   was not certain as to the start year I think at the

 9   time I prepared this.

10   Q   Looking again at your Schedule JG-6,

11   in the far right column you show the option for a

12   combined cycle unit; is that correct?

13   A   Yes.

14   Q   And you use a capacity factor for

15   this unit of only 50 percent, do you not?

16   A   Yes. To match -- to match the -- the

17   comparison here, yes.

18   Q   I'm sorry, could you explain that?

19   A   I was attempting to compare these as

20   much as an apples to apples basis as possible for

21   the -- for the energy cost here. Or for the cost

22   here between the Grain Belt project -- or Grain

23   Belt supplied wind and these other alternatives.

24   Q   What's the usual capacity factor for

25   the combined cycle units?

```
 1        A      It can depend highly.  Our share of a

 2  combined cycle facility in western Missouri I think

 3  is -- set a record this year at something less than

 4  30 percent.

 5        Q      Is that a capacity factor or

 6  utilization rate?

 7        A      That's the net capacity factor it

 8  performed at.

 9        Q      Is that typical for a combined cycle

10  unit?

11        A      I am not sure how you would define

12  typical.  I think it varies.  But I think it would

13  not be that unusual.  That unit's dispatched in the

14  SPP market.

15        Q      What's the, just for clarification,

16  the difference in meaning between capacity factor

17  and utilization rate?

18        A      I'm not sure I'm clear on what you're

19  defining as utilization rate.  Capacity factor is

20  meaning the use of a facility against the -- the

21  average generation against the potential

22  generation.

23        Q      And you're not familiar with the term

24  "utilization rate"?

25        A      I am not certain of the way in which
```

 1   you're using that.

 2   Q   Well, are you familiar with the term?

 3   A   I've heard that used, but I'm not

 4   clear of your definition.

 5   Q   I'm not asking if you're clear about

 6   mine. I'm asking what your definition of the term

 7   is.

 8   MR. HEALY: Objection, just a point

 9   as argumentative. If Mr. Agathen wants to define

10   the term so my witness understands, I'm sure he'd

11   be happy to explain.

12   JUDGE BUSHMANN: Overruled.

13   A   I do not normally use, see the term

14   "utilization factor" used.

15   Q   (BY MR. AGATHEN) So you don't know

16   what the definition is?

17   A   I don't know your definition, no.

18   Q   If you turn your Schedule JG-7 for a

19   moment, in the fourth column there, what capacity

20   factor do you use for the combined cycle unit?

21   A   I believe that was at 30 percent.

22   Q   That was based on your experience

23   with the one unit?

24   A   Yes. With the expectation that would

25   continue to rise.

 1   Q   On a different subject, would you

 2   turn, please, to page 8 of your rebuttal?

 3   A   Okay, I'm there.

 4   Q   Lines 7 to 9 you say that in

 5   conjunction with the Grain Belt contract, you'll

 6   also need to purchase additional gas generation; is

 7   that correct?

 8   A   Yes.

 9   Q   Could you explain why you'll need to

10   purchase additional gas generation to supplement

11   the Grain Belt contract?

12   A   To supply the additional capacity

13   needs we would have.

14   Q   In other words, the capacity from the

15   Grain Belt line will not make up for the capacity

16   from the coal contract in Illinois?

17   A   It will not one for one. As we were

18   getting into earlier, the amount that can be

19   credited to meet SPP reserve requirements or

20   capacity requirements do not allow for the full

21   name plate of a wind unit.

22   Q   If you go to Schedule JG-7, I've got

23   some questions just for clarification.

24   A   Okay, I'm there.

25   Q   How much capacity are you going to

1   lose, a credited capacity, from the contract with

2   the Illinois coal supplier?

3   A   100 megawatts.

4   Q   Now, the first source for replacing

5   that 100 megawatts that you have listed is the

6   Grain Belt contract; correct?

7   A   Yes.

8   Q   For capacity planning and reliability

9   purposes, how many megawatts would you get credit

10   for from that contract?

11   A   In this I included the expectation

12   that we would get, for the 60 megawatts, we would

13   get 6 megawatts credited within SPP.

14   Q   Okay. Now, that 6 megawatt figure

15   doesn't show up anywhere on the schedule, does it?

16   A   It does not.

17   Q   Okay. So let's go through these one

18   by one. The next one is SPP wind. How much

19   capacity credit did you assume you would be given

20   for that?

21   A   2.5.

22   Q   And for the SPP combined cycle?

23   A   That's 50.

24   Q   And then going over to the existing

25   units, the SPP Higginsville? What's the assumed

 1   capacity credit there?

 2   A   38.

 3   Q   And for the SPP Marshall wind?

 4   A   2.

 5   Q   And MC Power solar?

 6   A   I believe that was 3.2.

 7   Q   And the total should end up equaling

 8   the 102 that you have shown on the far right?

 9   A   In round, in whole megawatts, yes.

10   Q   Sure. Thank you. So some of the

11   capacity credits that you're going to use to make

12   up for the Illinois contract, you're assuming are

13   going to come from existing units; right?

14   A   Existing as in constructed under

15   contract today.

16   Q   Are they actually existing today?

17   A   Yes.

18   Q   So they're running on your system?

19   A   Yes, they are. Those were added in

20   the last year or so.

21   Q   Is MJMEUC or MoPEP required to

22   maintain some minimum level of reserves by the SPP?

23   A   Yes.

24   Q   Does that amount to approximately 77

25   megawatts?

```
 1        A      I haven't done the calculation in

 2   front of me but that sounds about right.  It's a

 3   load based, so depending on the projected load, it

 4   varies.

 5        Q      Right.  On a different subject, your

 6   contact with Grain Belt allows you to purchase up

 7   to 50 megawatts of service for Missouri to PJM;

 8   correct?

 9        A      Yes.

10        Q      And according to Grain Belt, that

11   gives you the option to sell excess energy and

12   capacity into the PJM system if the prices are

13   right?

14        A      It would give us that opportunity,

15   yes.

16        Q      You didn't mention that option in

17   your testimony anywhere, did you?

18        A      I don't believe I did.

19        Q      Nor did Mr. Kincheloe?

20        A      I don't believe he did.

21        Q      Have you done any kind of study to

22   calculate what the value might be to your member

23   utilities of this service from Missouri to PJM?

24        A      Not in any detail, no.

25        Q      Another data request.  Surprise, huh?
```

 1   This is data request MJM.62. Correct?

 2   A   Yes.

 3   Q   And we're asking you to "Please

 4   provide a copy of all studies and analyses used by

 5   MJMEUC or its member utilities in calculating the

 6   value to MJMEUC and its members of the optional

 7   Missouri to Sullivan substation service on the

 8   Grain Belt line." Is that correct?

 9   A   Yes.

10   Q   And your response was?

11   A   "None."

12   Q   Do you have any documents or other

13   correspondence which didn't address the possibility

14   any of member utility utilizing this proposed

15   service from Missouri to PJM?

16   A   I don't believe so.

17   Q   Have any of your member utilities

18   even expressed an interest in buying capacity on

19   the line for the Missouri to PJM service?

20   A   Not in any detail. I think when

21   explaining it to the MoPEP folks, they were aware

22   of it.

23   Q   Did they express any interest?

24   A   Interest in being curious about the

25   potential but not as in any commitments, let me say

 1   it that way.

 2   Q   So they have not expressed an

 3   interest in buying capacity on the Grain Belt line

 4   for the Missouri to PJM service?

 5   A   They have not yet, no.

 6   Q   I have just a few questions now about

 7   your surrebuttal testimony, Exhibit 477, I believe.

 8   Do you have that?

 9   A   Just a moment. All right. What was

10   the page again?

11   Q   Page 4, and at lines 12 to 16 or so,

12   you say that certain opposing witnesses should have

13   realized before they filed their rebuttal testimony

14   that what you call the final all-in price for the

15   wind energy delivered over the Grain Belt project

16   would be approximately $23 per megawatt hour. Is

17   that correct?

18   A   Could you reference again the lines

19   to make sure I'm on the right --

20   Q   12 to 16 or so.

21   A   I think you're summarizing, but yes.

22   Q   When you say all-in, does that mean

23   the cost of the Grain Belt capacity plus the cost

24   of the energy?

25   A   The capacity and energy delivered

1   into MISO, yes.

2   Q   So in total, the number supposedly

3   was $23 per megawatt hour; right?

4   A   That was an early indication that we

5   had and had provided to some.

6   Q   The document you're relying on was

7   written at the same time that the MJMEUC contract

8   with Grain Belt was signed; is that correct?

9   A   Yes.

10   Q   Which was about June 2 of 2016?

11   A   Yes.

12   Q   And that all-in number also had you

13 include the price of energy then from one of the

14 wind farms; right?

15   A   It had an indicative number there to

16 use as a proxy.

17   Q   At that point you hadn't even put out

18 a request for bid for wind power, had you?

19   A   That's correct.

20   Q   Do you recall that early on in the

21 discovery process we asked MJMEUC for documents

22 related to its negotiations with wind farms for the

23 cost of energy?

24   A   I believe that's right.

25   Q   And we were told at that time that

 1   **you were in the midst of negotiations with**

 2   **Infinity; correct?**

 3   A   I believe so. I'd have to look back

 4   at the timing to be sure of that, but yes.

 5   Q   **And do you recall that the MLA, my**

 6   **group, voluntarily withdrew its request for**

 7   **documents related to the negotiations with Infinity**

 8   **so as not to interfere with those negotiations. Is**

 9   **that correct?**

10   A   I think counsel made me aware of

11   that, yes.

12   Q   **And that was back in November of**

13   **2016; correct?**

14   A   I believe that was the time frame.

15   Q   **Some two months before our rebuttal**

16   **was due; right?**

17   A   Sounds correct.

18   Q   **Do you recall, sir, that when we**

19   **voluntarily withdrew our request for documents**

20   **related to your negotiations with Infinity --**

21   MR. HEALY: Judge, I object, it's

22   already been asked and answered.

23   MR. AGATHEN: It's leading up to

24   another question.

25   JUDGE BUSHMANN: I'll let you finish

 1   your question.

 2   Q   (BY MR. AGATHEN)   -- that we

 3   submitted a different data request to you, MJM.28?

 4   A   I believe so.

 5   Q   And in that data request we said,

 6   quote, "Please inform the Missouri Landowners

 7   Alliance as soon as the negotiations between

 8   Infinity Wind Power and MJMEUC for the possible

 9   purchase of wind energy to be transmitted over the

10   proposed Grain Belt line are concluded or

11   terminated." Correct?

12   A   That's what it says, yes.

13   Q   And the date this document was served

14   was November 11, 2016?

15   A   Okay.

16   Q   Isn't it true, Mr. Grotzinger, that

17   we didn't hear word one back in response to this

18   data request until you filed the actual Infinity

19   contract with your rebuttal testimony?

20   A   That's probably true. I think we

21   finished it shortly before that rebuttal was due.

22   Q   So your actual contract was not

23   finished until you filed your testimony?

24   A   I think it was -- I think it was in a

25   close proximity to that time frame.

 1   Q   But you're blaming our witnesses for

 2   not assuming that some number six months before

 3   that was an accurate portrayal what your cost was

 4   going to be?

 5   MR. HEALY: Objection, argumentative.

 6   JUDGE BUSHMANN: Sustained.

 7   MR. AGATHEN: Your Honor, my only

 8   other questions deal with documents marked as

 9   highly confidential.

10   JUDGE BUSHMANN: All right, we'll go

11   into closed session, then. Folks in the audience

12   that are not authorized to listen to highly

13   confidential information will need to step outside

14   for a few minutes.

15   (REPORTER'S NOTE: At this point, an

16   in-camera session was held, which is contained in

17   Volume 17 - Pages 1083 through 1095.)

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 1                    (REPORTER'S NOTE:  Back in open

 2    session.)

 3                    JUDGE BUSHMANN:  We're back in open

 4    session and ready for questions from Commissioners.

 5                    CROSS-EXAMINATION

 6    QUESTIONS BY CHAIRMAN HALL:

 7         Q      Morning.

 8         A      Morning.

 9         Q      I have a few clarifying questions, I

10    believe.  From my perspective it's -- it's -- it's

11    really important that the record is clear as to the

12    savings that would inure to your member cities

13    under transmission and energy contracts that are at

14    issue in your testimony.

15                    So I understand your estimate for the

16    -- for the MoPEP savings to be approximately $10

17    million a year, and that is both transmission and

18    energy; is that correct?

19         A      Capacity and energy, yes.

20         Q      Okay.  And for MJMEUC, I understand

21    your estimate to be that the transmission savings

22    are $10 million a year?

23         A      That was a -- just looking at the

24    transmission comparison for -- as if it was all

25    sourced from SPP, yes.  That did not include the
```

 1   additional benefits that are highlighted to the

 2   MoPEP -- that MoPEP discussion.

 3   **Q   Well, have -- is there somewhere in**

 4   **your testimony or somewhere else in the record**

 5   **where -- where -- where the total savings for**

 6   **MJMEUC, transmission and energy, or capacity, is**

 7   **set forth?**

 8   A   No, not in the entirety of the

 9   membership because we've identified that for MoPEP,

10   but for the other cities that are entering into it,

11   or will enter into it, we have not done a specific

12   savings. So it would be in addition to the 10

13   million for MoPEP. We have not identified exactly

14   what that number would be.

15   **Q   Is there an estimate somewhere?**

16   A   Call it maybe back-of-the-envelope

17   estimates. I did take a look just simply at how it

18   lowers their cost to serve their loads on an annual

19   basis just by having the additional 500 megawatts

20   of Grain Belt inserted into MISO and --

21   **Q   Now, that's -- that's -- that's**

22   **separate and apart from -- from the 200 megawatts**

23   **that -- that MJMEUC has available.**

24   A   Right. That simply is a part of the

25   project, if anybody had -- if it goes forward at

 1   all. And that's almost 2 million a year.

 2   **Q   So there's -- so there's nothing in**

 3   **the record that explains or describes or -- what --**

 4   **what the overall savings could be to MJMEUC with**

 5   **this 200 megawatts of energy delivered by Clean**

 6   **Line?**

 7   A   We haven't quantified beyond the

 8   approximately 10 million a year from MoPEP. So

 9   it's -- it's 10 million plus whatever the

10   additional 76 megawatts or more we anticipate would

11   occur. So that's for the first 60 megawatts of it.

12   **Q   Well, that's unfortunate, because I**

13   **think that would have been quite an asset to your**

14   **case.**

15   CHAIRMAN HALL: Thank you.

16   JUDGE BUSHMANN: Recross based on

17   bench questions? Grain Belt?

18   MR. ZOBRIST: No questions, Judge.

19   JUDGE BUSHMANN: Sierra Club?

20   MR. ROBERTSON: No questions.

21   JUDGE BUSHMANN: Wind on the Wires?

22   MR. BRADY: One question.

23   CROSS-EXAMINATION

24   QUESTIONS BY MR. BRADY:

25   **Q   Did you say there was $10 million**

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 1   savings for the first 60 megawatts?

 2        A    That's for the MoPEP group's 60

 3   megawatts, and I referred to that as the first 60.

 4        Q    And in other words, there was the 76

 5   megawatts that you don't have a quantified savings

 6   for?

 7        A    I have not quantified what the

 8   individual city savings would be.

 9             MR. BRADY:  Okay.  Thank you.

10             JUDGE BUSHMANN:  Infinity Wind Power?

11             MS. PEMBERTON:  No questions.

12             JUDGE BUSHMANN:  MIEC?

13             MR. MILLS:  No questions.

14             JUDGE BUSHMANN:  Commission Staff?

15             MR. WILLIAMS:  Thank you.

16                  CROSS-EXAMINATION

17   QUESTIONS BY MR. WILLIAMS:

18        Q    Mr. Grotzinger, could you do the

19   calculation that Chairman Hall asked you about?

20        A    I would need to coordinate with the

21   members to understand better what they're

22   replacing, what their alternatives would be, to

23   fully quantify that.

24             MR. WILLIAMS:  No further questions.

25             JUDGE BUSHMANN:  Rockies Express?
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 1                    MS. GIBONEY:  No questions, Judge.

 2                    JUDGE BUSHMANN:  Show Me Landowners?

 3                    MR. LINTON:  No questions.

 4                    JUDGE BUSHMANN:  Farm Bureau?

 5                    MR. HADEN:  None, Judge.

 6                    JUDGE BUSHMANN:  Missouri Landowners?

 7                    MR. AGATHEN:  None, Judge.

 8                    JUDGE BUSHMANN:  Redirect by MJMEUC?

 9                    MR. HEALY:  Just a few questions.

10   I'll start with Chairman Hall's question, it's a

11   pretty good one.

12                    REDIRECT EXAMINATION

13   QUESTIONS BY MR. HEALY:

14        Q    The energy portfolios of members not

15   in the full requirement pool, what is MJMEUC's

16   responsibility to those members?

17        A    MJMEUC is not responsible for

18   arranging their full requirements.  What I have

19   addressed with MoPEP is what we are responsible for

20   arranging for the full requirements.  For the other

21   cities, they are in charge of their own portfolio

22   arrangement.  We're available for their help, but

23   they're in charge of self providing that.

24        Q    It would be fair to say, though, that

25   MJMEUC does provide a significant quantity of both
```

 1   energy and capacity to those cities already, or at

 2   least some of them?

 3   A   That's correct.

 4   Q   Just not all of it?

 5   A   Just not all.

 6   Q   And neither you yourself nor MJMEUC

 7   has their full bills, energy cost for their entire

 8   portfolio; is that correct?

 9   A   That's correct.

10   Q   And does that complicate quantifying

11   the savings for particular cities?

12   A   Absolutely.

13   Q   Okay. And would you agree that due

14   to the timing, in fact, Hannibal got signed last

15   night, been a bit of a fire drill pulling this deal

16   together?

17   A   Yes.

18   Q   Okay. I want to take you back to the

19   Leidos study.

20   MR. HEALY: And we don't need to go

21   in camera, Judge, just some general questions that

22   are public, I think. I just want to make a few

23   clarifications.

24   Q   (BY MR. HEALY) How many pages was

25   the Leidos study in full?

 1   A   I did not identify or do a page count

 2   but it was about two inches thick, double-sided

 3   print.

 4   **Q   And that was provided to both**

 5   **opposing counsel and the experts?**

 6   A   I believe so.

 7   **Q   Exhibit 368HC, that was one you just**

 8   **looked at in camera a minute ago. That was for one**

 9   **particular future; correct?**

10   A   Right.

11   **Q   Okay. Did that include all scenarios**

12   **ran by Leidos?**

13   A   This page does not.

14   **Q   Okay. The cohort groups in that**

15   **study, they represented different groups that had**

16   **different strategies, and did they also have**

17   **different resource portfolios?**

18   A   Absolutely.

19   **Q   Would you expect their needs to all**

20   **be identical?**

21   A   No. Not at all.

22   **Q   Was congestion pricing part of the**

23   **overall Leidos study?**

24   A   No.

25   **Q   Was it included in the results of the**

```
 1   analysis?

 2        A     Not in the Leidos study, no.

 3        Q     If I could have you turn just briefly

 4   to JG-3?  And that was the calculation of the price

 5   difference between different transmission paths,

 6   GBX and the traditional SPP into MISO.

 7             The first figure you relied on was

 8   $2,880 per megawatt month.  How did you arrive at

 9   that number?

10        A     I pulled that from -- rounded up from

11   a sample bill in January of 2016.

12        Q     Does that reflect SPP through an out

13   pricing?

14        A     Yes, it does.

15        Q     And just for the Commission's benefit

16   and my edification, what's that mean?

17        A     Well, that was a sample based on

18   bills that we are taking from a source with inside

19   of SPP out -- out of SPP into another region.

20        Q     Okay.  Do you still consider that

21   number accurate?

22        A     Well, it -- it's increased.  I think

23   we supplied as one of the data requests a selection

24   of bills that we received and noted that the

25   January of 2017 was substantially higher than the
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 1   example I used.
 2        Q      How much that was number?
 3        A      From memory, I think it was, instead
 4   of the 2,880, it was more like 3,387.
 5        Q      Okay.  Roughly 20 percent increase?
 6        A      Nearly 20 percent.
 7        Q      In your experience, does the SPP and
 8   the MISO rate ever go down over time?
 9        A      Not that I'm aware of, unless there's
10   some outstanding circumstance.
11        Q      Okay.
12        A      Such as a settlement or something.
13        Q      If you were to substitute the newer
14   number, more recent number, would that change the
15   final numbers or your opinion in JG-3?
16        A      It would not change my opinion.  It
17   would change the numbers.
18        Q      What would it change?
19        A      It would change the SPP transmission
20   costs.  Increase the savings.
21        Q      It would increase the savings?
22        A      Yes.
23        Q      Stay on JG-3 just a second.  I don't
24   suppose you have a calculator up there with you, do
25   you?
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 1          A      I do not.

 2                 MR. HEALY:   If I may approach, Judge?

 3                 JUDGE BUSHMANN:   Okay.

 4          Q      (BY MR. HEALY)   I'll hand you a

 5   calculator.   If you look at the column with the $6

 6   congestion pricing and the 200 megawatt usage at

 7   the more recent SPP number, can you calculate the

 8   all-in transmission cost from SPP at 200 megawatts?

 9          A      Yes.

10          Q      What is that number?

11          A      Roughly 8.1 million.

12          Q      Okay.   Do you have a pen up there,

13   Mr. Grotzinger?

14          A      Yes, I do.

15          Q      Can you mark on your exhibit that new

16   number?   Actually, in your book there in front of

17   you?

18          A      Okay.

19          Q      What's that impact have on the

20   savings that are estimated using the GBX rate?

21                 MR. AGATHEN:   Your Honor, I'm going

22   to object to this line of questioning.   Counsel is

23   attempting to supplement the record with new facts

24   that we have not had a chance to review, there's

25   been no chance for discovery, no chance for
```

 1   verification.

 2   MR. HEALY: Actually, Judge, the

 3   numbers we've used have been turned over to

 4   opposing counsel. I'm just demonstrating they

 5   cross-examined on these rates and the accuracy of

 6   the schedule. I think I should be afforded a

 7   little bit of latitude to show the numbers can

 8   indeed go both ways.

 9   JUDGE BUSHMANN: Overruled.

10   A   That would show an additional 1.2

11   million a year in savings.

12   **Q   (BY MR. HEALY) Okay. Do you know**

13   **what the GBX full price rate is from your**

14   **discussion with Mr. Agathen earlier?**

15   A   56 -- I didn't write that down, but

16   5,600 and change a month.

17   **Q   Okay. If you put that into your**

18   **schedule, using that updated SPP number, are there**

19   **still savings at the full tariff rate versus SPP**

20   **and the MISO?**

21   A   Just a moment.

22   MR. AGATHEN: Your Honor, could I

23   ask, just for clarification, what number is being

24   used for the full rate?

25   JUDGE BUSHMANN: I will ask as soon

 1 as he's finished.

 2   A I'm sorry, I interrupted, what -- I

 3 started with 5,688. I'll be glad to correct that

 4 and redo it.

 5   Q (BY MR. HEALY) Mr. Grotzinger, isn't

 6 **that the correct tariff rate?**

 7   A I'll use that. I believe that would

 8 drop it to 7.2 million.

 9   **Q Let me just walk you through your**

10 **schedule, might be a little bit easier. And I know**

11 **I have the advantage of your spreadsheet and your**

12 **work papers here in front of me.**

13   **Under your congestion table 6, or**

14 **column 6, Schedule 3, and subject to checking my**

15 **math and your spreadsheet, of course, but if you**

16 **use the number that you just used on SPP for the**

17 **January bill underlying losses, the total cost**

18 **would be $13,701,600, assuming congestion pricing**

19 **in the median at 6.**

20   A Okay.

21   **Q And subject to check, if you accept**

22 **my numbers and using the math you gave me in the**

23 **basis and using the number that I just gave Mr.**

24 **Agathen for the full tariff, Grain Belt TSA rate,**

25 **comes to 13,608,000.**

 1   **So on a 200 megawatt path, would you**

 2   **then agree the savings would still be cheaper at**

 3   **the full tariff rate using GBX versus using the**

 4   **traditional SPP and the MISO tariff?**

 5   A   Yes.

 6   MR. LINTON: Objection, Your Honor.

 7   Not only is he introducing new testimony at this

 8   point, he's leading the witness to new testimony.

 9   MR. HEALY: Judge, I'm just doing the

10   math for him. I understand it's subject to check.

11   If he thinks the math is wrong using his work

12   papers --

13   JUDGE BUSHMANN: This is information

14   I think is important to the Commission. Overruled.

15   **Q   (BY MR. HEALY) Would you agree with**

16   **that analysis, Mr. Grotzinger?**

17   A   Yes, I would. Subject to check.

18   **Q   Subject to check. Fair enough. And,**

19   **of course, using the fully tariffed GBX rate is not**

20   **what MJMEUC will be using; correct?**

21   A   That's correct.

22   **Q   If I can turn you to JG-6?**

23   A   Yes.

24   **Q   There was some question as to why you**

25   **added transmission charges under the SPP resources**

 1   versus why there were no transmission charges under

 2   the MISO resources.

 3   In your analysis there, do the MISO

 4   options need additional transmission to be

 5   delivered?

 6   A   Not into MISO.

 7   Q   Okay. So the SPP generation options

 8   need additional transmission to be delivered to

 9   load?

10   A   Yes, for delivering into MISO load

11   yes.

12   Q   And that's what's reflected towards

13   the bottom of that spreadsheet on the SPP side

14   versus SPP trans; correct?

15   A   That's correct.

16   Q   You were shown a data request

17   earlier, JG-54, reflecting the price of Crystal

18   Lake III?

19   A   Yes.

20   Q   Does that reflect the price of

21   Crystal Lake III in 2021 December, or January?

22   A   I believe that's in January.

23   Q   Do you know what the price is in

24   December of 2021?

25   A   I believe it's twenty-two oh two, if

 1   memory serves.

 2   **Q   Roughly 10 percent higher than the**

 3   **all-in option here of GBX and Iron Star?**

 4   A   Yes.

 5   **Q   And that's just a contract price;**

 6   **correct?**

 7   A   That's it.

 8   **Q   Does that reflect any congestion**

 9   **price differences in delivery points?**

10   A   It does not.

11   **Q   Are those significant?**

12   A   Yes. That was shown in one of the

13   exhibits.

14   **Q   Would that be your Schedule JG-8?**

15   A   Yes.

16   **Q   So how does MoPEP add resources? Do**

17   **they do it in large blocks or incrementally?**

18   A   Well, it has to be in relatively

19   large blocks. I mean, you can't add one megawatt

20   at a time. It's got to be larger blocks.

21   **Q   And when replacing an existing**

22   **resource, can you just, in large, kinda broad**

23   **overtones, describe how that is accomplished or**

24   **done?**

25   A   We'll look at increasing their

 1   portfolio with the added opportunity to try to make

 2   it as diverse and robust as possible.

 3   Q   And under Schedule JG-7, some of

 4   those resources are labeled "existing." How

 5   recently were those resources added?

 6   A   I believe I stated within the last

 7   couple years.

 8   Q   Was that part of the process of

 9   moving away from the IPM contract?

10   A   Absolutely.

11   Q   And there was some discussion

12   regarding PJM, will also some sale opportunities be

13   addressed when they become available?

14   A   Yes, we have not addressed those yet.

15   Q   That's because it doesn't serve load;

16   is that right?

17   A   That's correct. We don't serve any

18   load inside of PJM.

19   Q   Okay. And just a couple follow-up

20   questions. I don't know, you're roughly aware that

21   the day after negotiations were completed with Iron

22   Star, that both Missouri Landowners Association and

23   Show Me were provided a copy of the contract a day

24   after; correct?

25   A   Yes, it was very shortly thereafter,

 1   yes.

 2   Q   And we've talked a lot here today

 3   again about the energy and capacity and

 4   transmission savings. Does any of your analysis

 5   reflect emission savings?

 6   A   No, we have not included any

 7   environmental effects or benefits, RECs or any of

 8   those things.

 9   Q   And do they include any of the

10   potential benefits to the MoPEP group of their

11   ability to offer renewable retail products?

12   A   No. And we're currently

13   oversubscribed on our offering today and limited in

14   being able to offer more until we add additional

15   resources of that sort.

16   Q   What does MoPEP currently have in way

17   of an offering to its wholesale customers to offer

18   retail renewable products?

19   A   We're currently offering to those

20   with a high load factor, typically commercial,

21   industrial ability to identify and correlate

22   directly with renewable resources. Specifically

23   our -- our current Kansas wind project.

24   Q   Are those projects fully subscribed?

25   A   They are oversubscribed.

 1   Q   How long did it take to sell those

 2 products when they were offered?

 3   A   We made an offering and it was filled

 4 the closing date of that with more than we had

 5 available to be able to provide.

 6   Q   So it would be fair to say there's an

 7 outstanding demand for renewables from those cities

 8 not currently being met?

 9   A   Yes, and that was just the initial

10 offering there with the relatively short time

11 window for them to even entertain the offering.

12   MR. HEALY: No further questions.

13 Thank you.

14   JUDGE BUSHMANN: Thank you for your

15 testimony, Mr. Grotzinger, you may step down.

16   (Witness excused.)

17   JUDGE BUSHMANN: Mr. Robertson, is

18 Mr. Gupta still available? You had mentioned he

19 would be available until noon, and we are at noon.

20   MR. ROBERTSON: We could go probably

21 as late as 1:00 as long as we don't break for

22 lunch.

23   JUDGE BUSHMANN: Why don't we take a

24 short recess while we set up the telephone and then

25 we will have Mr. Gupta testify.

 1   MR. BRADY: I just want to point out

 2   I had mentioned yesterday Mr. Goggin has a conflict

 3   between 2:00 and 3:00 today, so it would be after 3

 4   o'clock if you wanted him.

 5   JUDGE BUSHMANN: We can probably do

 6   it, we'll have to take a lunch break after Mr.

 7   Gupta.

 8   MR. BRADY: Okay.

 9   (Short recess.)

10   JUDGE BUSHMANN: Let's go back on the

11   record. Our next witness by telephone for NRDC.

12   Mr. Robertson?

13   MR. ROBERTSON: Thank you, Judge.

14   DIRECT EXAMINATION

15   QUESTIONS BY MR. ROBERTSON:

16   **Q   Ashok, can you hear me?**

17   A   Yes, I can.

18   **Q   Would you state your name for the**

19   **record, please?**

20   A   Yes. My name is Ashok Gupta, which

21   is spelled A-s-h-o-k G-u-p-t-a.

22   JUDGE BUSHMANN: Just a second.

23   Before you get too far, I need to put him under

24   oath.

25   ///

 1   ASHOK GUPTA,

 2   having been called as a witness, was sworn

 3   by the Court, upon his oath, and testified

 4   as follows:

 5   JUDGE BUSHMANN: You may proceed, Mr.

 6   Robertson.

 7   (Wherein, Exhibit 725 was

 8   introduced.)

 9   **Q   (BY MR. ROBERTSON) Did you prepare**

10   **rebuttal testimony in this case on behalf of the**

11   **natural resources defense counsel, sir?**

12   A   Yes, I did.

13   **Q   And that's been designated Exhibit**

14   **725. Are there any changes or corrections you**

15   **would make to that testimony at this time?**

16   A   None.

17   **Q   If I were to ask you the same**

18   **questions today, would your answers be the same?**

19   A   Yes.

20   MR. ROBERTSON: Judge, I move the

21   admission of Exhibit 725.

22   JUDGE BUSHMANN: Any objections?

23   Hearing none, 725 is received into

24   the record.

25   MR. ROBERTSON: And I tender the

 1   witness for cross.

 2   JUDGE BUSHMANN: First cross would be

 3   Grain Belt?

 4   MR. ZOBRIST: No questions, Judge.

 5   JUDGE BUSHMANN: MJMEUC?

 6   MR. HEALY: No questions, Judge.

 7   JUDGE BUSHMANN: Wind on the Wires?

 8   MR. BRADY: No questions.

 9   JUDGE BUSHMANN: Infinity Wind Power?

10   MS. PEMBERTON: No questions.

11   JUDGE BUSHMANN: MIEC?

12   MR. MILLS: No questions.

13   JUDGE BUSHMANN: Commission Staff?

14   MR. WILLIAMS: No questions, thank

15   you.

16   JUDGE BUSHMANN: Rockies Express?

17   MS. GIBONEY: No questions, Judge.

18   JUDGE BUSHMANN: Show Me Landowners?

19   MR. LINTON: No questions.

20   JUDGE BUSHMANN: Farm Bureau?

21   MR. HADEN: No questions, Judge.

22   JUDGE BUSHMANN: Missouri Landowners?

23   MR. AGATHEN: Thank you, Judge.

24   JUDGE BUSHMANN: Mr. Agathen, you'll

25   have to get right on top of that microphone.

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 1                 CROSS-EXAMINATION

 2   QUESTIONS BY MR. AGATHEN:

 3        Q     Good morning, Mr. Gupta, my name is

 4   Paul Agathen.   I represent the Missouri Landowners

 5   Alliance.   Are you able to hear me?

 6        A     I can.

 7        Q     Would you turn, please, to page 1 of

 8   your rebuttal testimony?

 9        A     Yes.

10        Q     At lines 20 and 21 you state that the

11   Grain Belt project will bring low cost renewables

12   to Missouri; correct?

13        A     Correct.

14        Q     Have you conducted any kind of study

15   or analysis of the cost to Missouri utilities of

16   power transmitted over the Grain Belt project

17   compared to the cost of renewable energy from other

18   sources?

19        A     My comments are based on my

20   experience and general knowledge and not on any

21   specific original research or analysis that I did.

22        Q     So your answer is no?

23        A     Yes.   So basically it was based on

24   general knowledge and experience and not on any

25   original research or analysis.
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 1          Q      At lines 21 to 22 of page 1 you also
 2   state that the Grain Belt project will help to
 3   lower system costs for all customers; correct?
 4          A      Correct.
 5          Q      Have you conducted any kind of study
 6   or analysis which supports that statement?
 7          A      Similar to my other answer and I
 8   think generally my whole testimony is based on my
 9   experience and knowledge of the fact that we have,
10   you know, low cost wind in western Kansas and the
11   fact that this is a merchant line which will
12   determine what the costs are to customers.
13               So both those statements are based on
14   my general knowledge and experience and not on any
15   specific original research or analysis.
16          Q      So maybe I can save some time here.
17   If I went through basically line by line of your
18   testimony and asked if that statement was supported
19   by any study or analysis you did in this case, your
20   answer would be no?
21          A      Correct.  Basically I have been
22   working on these issues for 30 plus years and all
23   my comments related to benefits, whether it's
24   reliability costs or environmental, are based on my
25   experience and not on any specific analysis that
```

 1 was done by me.

 2   MR. AGATHEN: That's all I have, Your

 3 Honor. Thank you, Mr. Gupta.

 4   JUDGE BUSHMANN: Any questions from

 5 Commissioners?

 6   COMMISSIONER STOLL: I have no

 7 questions.

 8   JUDGE BUSHMANN: Redirect by NRDC?

 9   MR. ROBERTSON: No further questions.

10   JUDGE BUSHMANN: Mr. Gupta, that

11 completes your testimony, sir. You are excused.

12 Thank you for participating.

13   THE WITNESS: Thank you all very

14 much.

15   (Witness excused.)

16   JUDGE BUSHMANN: All right. This

17 seems like a good time to break for lunch. Why

18 don't we stand in recess until approximately 1:15.

19   (Lunch recess.)

20   JUDGE BUSHMANN: We're back on the

21 record. We're now ready for Wind on the Wires Wind

22 Coalition witness, Michael Goggin.

23   Mr. Goggin, can you hear me?

24   MR. GOGGIN: Yes, I can.

25   JUDGE BUSHMANN: Mr. Goggin is

```
 1   appearing by telephone.

 2                   MICHAEL GOGGIN,

 3        having been called as a witness, was sworn

 4        by the Court, upon his oath, and testified

 5        as follows:

 6                   JUDGE BUSHMANN:  Thank you.  Mr.

 7   Brady, whenever you're ready.

 8                   MR. BRADY:  Thank you.

 9                   DIRECT EXAMINATION

10   QUESTIONS BY MR. BRADY:

11        Q     Mr. Goggin, can you please state your

12   name for the record and spell your last name for

13   the court reporter, please?

14        A     Sure.  My name is Michael Steven

15   Goggin, and my spelling of the last name is

16   G-o-g-g-i-n.

17        Q     And by whom are you employed?

18        A     The American Wind Energy Association.

19        Q     And what is your position with the

20   American Wind Energy Association?

21        A     I am the senior director of research.

22        Q     And did you prepare testimony for

23   this case on behalf of Wind on the Wires and The

24   Wind Coalition?

25        A     Yes, I did.
```

 1   (Wherein, Exhibit 675 was

 2   introduced.)

 3   **Q   (BY MR. BRADY) Do you have in front**

 4   **of you a document that states in the upper**

 5   **right-hand corner Exhibit Number 675 with the**

 6   **following heading on the cover: Rebuttal Testimony**

 7   **of Michael Goggin submitted on behalf of Wind on**

 8   **the Wires and The Wind Coalition?**

 9   A   Yes, I do.

10   **Q   And does that document include a**

11   **cover page, a Table of Contents, 34 pages of**

12   **questions and answers, and seven schedules**

13   **identified as MG-1 through MG-7?**

14   A   Yes.

15   **Q   Were these documents prepared by you**

16   **or under your direction?**

17   A   Yes.

18   **Q   Are there any corrections to your**

19   **rebuttal testimony?**

20   A   There is one. On lines 99 to 100, I

21   state that "Kansas's wind resource could not

22   provide enough electricity to meet the equivalent

23   of the current electricity needs of the US at least

24   two times over." That should be corrected to read

25   "Kansas's wind resources could provide enough

 1 electricity to meet the equivalent of the current

 2 electricity needs of the US."

 3   And in addition, it's my

 4 understanding that an errata for this testimony was

 5 filed on March 17, and I have no changes to my

 6 testimony in schedules -- in addition to what has

 7 been identified in that errata.

 8   **Q   So if I were to ask you the questions**

 9 **in your testimony, your rebuttal testimony today,**

10 **would your answers be the same?**

11   A   Yes.

12   (Wherein, Exhibit 676 was

13 introduced.)

14   **Q   (BY MR. BRADY) Putting that document**

15 **aside, do you have before you two documents that**

16 **state in the upper right-hand corner Exhibit Number**

17 **676 with the following heading on the cover, Cross**

18 **Surrebuttal Testimony of Michael Goggin Submitted**

19 **on Behalf of Wind on the Wires and The Wind**

20 **Coalition?**

21   A   Yes.

22   **Q   And in the middle of the cover page**

23 **on one of those documents does it state that it's**

24 **"Highly confidential" and the other states that it**

25 **is "Public"?**

```
 1          A     Yes.

 2          Q      And do both documents include a cover

 3    page, a Table of Contents and ten pages of

 4    questions and answers?

 5          A     Yes.

 6          Q      Were these documents prepared by you

 7    or under your direction?

 8          A     Yes.

 9          Q      And are there any corrections to your

10    cross-surrebuttal testimony?

11          A     None other than the errata to the

12    testimony that was filed on March 17, I have no

13    changes beyond that.

14          Q      If I were to ask you the questions in

15    your cross-surrebuttal testimony today, would your

16    answers be the same?

17          A     Yes.

18               MR. BRADY:  With that, Your Honor, I

19    move that Exhibits 675 and 676 with their attached

20    schedules be moved into the record, and I also move

21    for the admission of the errata sheet for rebuttal

22    testimony of Michael Goggin, we'll identify that as

23    Exhibit Number 677, and I'll move for the admission

24    of errata sheet for cross-surrebuttal testimony of

25    Michael Goggin.  We'll identify that as Exhibit 678
```

 1   and I'll -- so I move Exhibits 675, 676, 677, and

 2   678 into the record.

 3   (Wherein, Exhibits 677 and 678 were

 4   introduced.)

 5   JUDGE BUSHMANN: Any objections?

 6   MR. AGATHEN: I do, Your Honor. Paul

 7   Agathen for the Missouri Landowners Alliance. In

 8   lieu of reading my objections into the record at

 9   this point, we've distributed copies of our

10   objections in advance and I would ask that the

11   Missouri Landowners Alliance objections 384 be made

12   part of the record.

13   JUDGE BUSHMANN: Since those are

14   already a part of a motion that was already ruled

15   on, I will overrule the objections designated as

16   number 384 and receive into the record Exhibits

17   675, 676, 677, 678.

18   MR. WILLIAMS: Judge, if I might add?

19   Were those objections to both exhibits? 675 and

20   676?

21   MR. AGATHEN: The objections identify

22   which specific portions of the testimony they note

23   -- they go.

24   MR. WILLIAMS: Thank you.

25   MR. BRADY: So with that, Your Honor,

 1   I make Michael Goggin available for

 2   cross-examination.

 3   JUDGE BUSHMANN: First cross would be

 4   by Grain Belt.

 5   MR. ZOBRIST: No questions, Judge.

 6   JUDGE BUSHMANN: MJMEUC?

 7   MR. HEALY: No questions, Judge.

 8   JUDGE BUSHMANN: Sierra Club?

 9   MR. ROBERTSON: Yes, Judge.

10   CROSS-EXAMINATION

11   QUESTIONS BY MR. ROBERTSON:

12   **Q   Mr. Goggin, can you hear me?**

13   A   Yes, I can.

14   **Q   My name is Henry Robertson, I am the**

15   **attorney for Sierra Club and Natural Resources**

16   **Defense Council. I'd like to refer to you page 12**

17   **of your rebuttal.**

18   A   Okay. I'm there.

19   **Q   And you have there a calculation of**

20   **what Ameren would need to meet the renewable energy**

21   **standard in Missouri. You say 4 million megawatt**

22   **hours of non-solar renewable RECs which could be**

23   **provided by approximately 1,200 megawatts of wind**

24   **with a capacity factor of 38 percent; is that**

25   **right?**

```
 1          A       That's correct.
 2          Q       What is the basis for that capacity
 3   factor?
 4          A       That was just a rough number I used.
 5   You know, within this situation there wasn't
 6   clarity on what type, you know, where the resource,
 7   the wind resource would be located and so, you
 8   know, if it was an end region, you know, closer to
 9   Missouri, you'd probably have a lower capacity
10   factor.  If it was, you know, of the resource type
11   delivered via Grain Belt, it would essentially be a
12   higher capacity factor.
13               But for the purposes here it wasn't
14   clear which of those resource types it was, so I
15   just used a somewhat arbitrary middle number.
16          Q       Now, is this calculation to meet
17   renewable energy standard of 10 percent of sales or
18   15 percent?
19          A       I believe this is the 15 percent by
20   2021.
21          Q       Would you be open to the suggestion
22   that your 4 million megawatt hour figure is an
23   underestimate?
24          A       That's possible.  I'm not as fully up
25   to speed on late developments in this case, so
```

 1   that's possible.

 2   (Wherein, Exhibit 201 was

 3   introduced.)

 4   Q   (BY MR. ROBERTSON) I want to refer

 5   to Staff's rebuttal report. I can't show it to you

 6   so you'll have to take my word for it, but on page

 7   -- I believe it's been marked Exhibit 201.

 8   On page 17 Staff performed a similar

 9   calculation and then found, based on Ameren's 2015

10   sales, their non-solar 2021 RES requirements 5.274

11   million megawatt hours. Does that sound reasonable

12   to you?

13   A   It does sound reasonable, yes.

14   Q   Now, you consulted Ameren's own 2016

15   RES compliance plan, did you not?

16   A   Yes.

17   Q   Do you recall what figure Ameren gave

18   for its own requirement?

19   A   I do not recall.

20   Q   All right. I am going to refer you

21   to an excerpt from Ameren's 2016 to '18 compliance

22   plan which I'll label Exhibit 726, if you'll bear

23   with me.

24   You still there?

25   A   Yes.

```
 1                    (Wherein, Exhibit 726 was
 2     introduced.)
 3          Q     (BY MR. ROBERTSON)  I just excerpted
 4     Table 2 from Ameren's report and for the year 2018
 5     with a 10 percent RES requirement Ameren estimated
 6     its non-solar renewable revenue requirement at
 7     watts 3,157,757 megawatt hours.
 8                    Now, if that increases to 15 percent
 9     and we assume that Ameren's sales remain the same,
10     then by 2021 they would need a little less than
11     1,600,000 additional megawatt hours, which adds up
12     to roughly 4,700,000 megawatt hours.
13                    Did you assume that Ameren's sales
14     would decline by that much to get down to 4 million
15     megawatt hours?
16          A     No, I did not.
17          Q     Okay.  Well, there are now three
18     figures in evidence concerning the 15 percent
19     non-solar requirement for Ameren and yours is the
20     lowest.  So it could be, would you agree, more than
21     1,200 megawatts of wind that would be needed to
22     make that requirement?
23          A     I agree.
24          Q     And are you familiar with Ameren's
25     existing renewable energy resources?
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 1        A     Generally.

 2        Q     All right.  Well, I can refer to

 3  Staff summary 102.3 megawatts of wind coupled with

 4  approximately one million RECs from Ameren Missouri

 5  owned renewable facilities.

 6              If we were to add to that 500

 7  megawatts of Missouri wind, and assume that Ameren

 8  bought all of the unbundled RECs from that 500

 9  megawatts in Missouri wind, they would still be

10  well short of meeting their renewable energy

11  requirement; would you agree?

12        A     Yes, I would agree.

13              MR. ROBERTSON:  All right.  That's

14  all I have.  Thank you.

15              JUDGE BUSHMANN:  Cross by Infinity

16  Wind?

17              MS. PEMBERTON:  No questions.

18              JUDGE BUSHMANN:  By MIEC?

19              MR. MILLS:  No questions.

20              JUDGE BUSHMANN:  Commission Staff?

21              MS. MYERS:  No questions, Judge.

22              JUDGE BUSHMANN:  Rockies Express?

23              MS. GIBONEY:  No questions, Judge.

24              JUDGE BUSHMANN:  Show Me Landowners?

25              MR. LINTON:  Just a few, Your Honor.
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 1                    CROSS-EXAMINATION
 2   QUESTIONS BY MR. LINTON:
 3        Q      Good afternoon, Mr. Goggin, my name
 4   is David Linton, I represent Show Me Concerned
 5   Landowners.
 6        A      Good afternoon.
 7        Q      I would like to direct your attention
 8   to page 19 of your rebuttal testimony.
 9        A      I'm there.
10        Q      Line 394, you state, "A weak electric
11   grid makes it possible for generation owners in
12   constrained sections of the electric grid to exert
13   market power and charge excessive prices."
14               Do you see that?
15        A      Yes, I do.
16        Q      I assume that's a bad thing?
17        A      In general, higher prices are bad for
18   consumers, yes.
19        Q      Okay.  And who is responsible for
20   designing the electric grid?
21        A      It's, in regions such as Missouri,
22   it's the ISOs take the lead in planning
23   transmission.
24        Q      And how do they get funds to build
25   and enhance the electric grid?
```

 1   A   Those are collected from rate payer

 2 payments, basically loads or entities clock those

 3 through their bills and those are, you know,

 4 aggregated to the ISO and used to pay for those

 5 upgrades.

 6   Q   So as customers use the system,

 7 whether that's generators or load-serving entities,

 8 the -- the loads pay for the use of the system via

 9 charges in the tariff?

10   A   That's how it works in MISO, yes.

11   Q   Would you agree that's how it works

12 in SPP as well?

13   A   Yes, I would.

14   Q   Now, if transmission service is

15 diverted from SPP and MISO to an HVDC line, that

16 will be revenue that SPP, MISO, and their member

17 transmission owners will lose; correct?

18   A   I don't know that it would be

19 diverted. You know, there are still -- I mean, I

20 guess are you talking about revenue associated with

21 future wind deployment?

22   Q   Right. If the wind generator

23 connects to SPP and/or MISO and SPP and/or MISO

24 have to upgrade the network to provide service to

25 that service, to that request for transmission

1 **service, take that as one scenario. And as a -- an**

2 **alternate scenario you take a transmission or a**

3 **wind generator that generates in Kansas and**

4 **provides that service via an HVDC line, the**

5 **transmission revenue will go to the merchant**

6 **provider of the HVDC line and not go to SPP or**

7 **MISO. Correct?**

8   A   That would be true, but at the same

9 time the ISO would not be incurring the cost of

10 those AC system upgrades that would be necessary to

11 facilitate those new projects and since, you know,

12 their revenue is necessary and kept at the level to

13 only recover the cost, it should have no net impact

14 because both the cost and the revenue would not go

15 up by the same amount.

16   Q   **And I think what you said is that in**

17 **not responding to that request, SPP and MISO would**

18 **not incur the cost of building an upgrade on the**

19 **system?**

20   A   That's correct.

21   Q   **And not -- that would also not**

22 **enhance the grid?**

23   A   The AC system. The DC system would

24 be enhanced through the construction of the line.

25   MR. LINTON: Thank you very much. No

```
 1   further questions.

 2                   THE WITNESS:  Sure.

 3                   JUDGE BUSHMANN:  Questions by Farm

 4   Bureau?

 5                   MR. HADEN:  None, Your Honor.

 6                   JUDGE BUSHMANN:  Missouri Landowners?

 7                   MR. AGATHEN:  Yes, Your Honor.  Thank

 8   you.

 9                   CROSS-EXAMINATION

10   QUESTIONS BY MR. AGATHEN:

11        Q     Good afternoon, Mr. Goggin.

12        A     Good afternoon.

13        Q     My name is Paul Agathen, I am

14   appearing on behalf of the Missouri Landowners

15   Alliance and four other Intervenors.  Can you hear

16   me?

17        A     Yes, I can.

18        Q     You're testifying on behalf of both

19   Wind on the Wires and The Wind Coalition; correct?

20        A     That's correct.

21        Q     Are there any members on the board of

22   Wind on the Wires from Clean Line?

23        A     I believe there are.  I'm not a --

24   you know, I don't work for Wind on the Wires, but

25   I've seen publicly available information that
```

 1   indicates there are.

 2   Q   Are there any members on the board of

 3   The Wind Coalition from Clean Line?

 4   A   Again, I believe so based on public

 5   information.

 6   Q   And does Clean Line make annual

 7   financial contributions to both of those

 8   organizations?

 9   A   I believe so. That's the nature of

10   how those organizations work.

11   Q   Your actual employer is the American

12   Wind Energy Association; correct?

13   A   That's correct.

14   Q   Is it correct that Mr. Skelly of

15   Clean Line is an officer with the American Wind

16   Energy Association?

17   A   He is on the board. That's correct.

18   Q   And that Clean Line contributes

19   regularly to the American Wind Energy Association?

20   A   Yes, as all wind industry members who

21   are members of AWEA do, yes.

22   Q   In conjunction with this case, did

23   you perform an independent study or analysis of the

24   relative costs to utilities in Missouri of

25   purchasing Kansas wind energy transmitted over the

 1   **Grain Belt line versus other sources of supply?**

 2   A   I consulted industry data sources and

 3   used my expert opinion to provide information about

 4   the relative cost of different wind energy

 5   resources in both Kansas and, you know, other, you

 6   know, less high quality wind resources.

 7   **Q   Did you perform an actual study or**

 8   **analysis of that situation?**

 9   A   I did not.

10   **Q   Did you do such an analysis of the**

11   **ability of Ameren Missouri to purchase additional**

12   **renewable energy without exceeding the rate cap in**

13   **Missouri?**

14   A   I did not.

15   **Q   Did you do an analysis of the impact**

16   **of the Grain Belt project on wholesale electricity**

17   **prices in Missouri?**

18   A   I did not.

19   **Q   Did you do such an analysis on the**

20   **impact of the Grain Belt project on transmission**

21   **congestion in Missouri?**

22   A   I did not.

23   **Q   And finally, did you do such an**

24   **analysis of congestion costs associated with**

25   **delivering Kansas wind energy into Missouri on the**

 1   **AC system?**

 2   A   I qualitatively spoke to that in my

 3   testimony but I did not do independent analysis.

 4   **Q   You're familiar with the document**

 5   **titled Wind Technologies Market Report published by**

 6   **the US Department of Energy, are you not?**

 7   A   Yes, I am.

 8   **Q   We're going to distribute a copy of**

 9   **here what's been marked as Exhibit 374 and that**

10   **consists of certain pages of that Wind Technology**

11   **Market Report.**

12   **(Wherein, Exhibit 374 was**

13   **introduced.)**

14   **Q   (BY MR. AGATHEN) You have a copy of**

15   **the full document there with you, do you not?**

16   A   I do.

17   **Q   And that was issued in August of last**

18   **year; is that correct?**

19   JUDGE BUSHMANN: Did you hear that

20   question, Mr. Goggin?

21   THE WITNESS: No, I didn't.

22   **Q   (BY MR. AGATHEN) Was that issued in**

23   **August of last year?**

24   A   Yes, it was.

25   **Q   So at this point that would be the**

 1   latest version of that publication; correct?

 2   A   That's correct.

 3   Q   Could you turn, please, to Roman

 4   Numeral page IX of the report, Roman Numeral IX, I

 5   guess, near the beginning.

 6   A   Yes, I'm there.

 7   Q   And the heading of the last bullet

 8   point on that page states that the relative

 9   economic competitiveness of wind power declined in

10   2015 with the drop in wholesale power prices; is

11   that correct?

12   A   That's correct, due to the abnormally

13   low natural gas prices that were present in 2015.

14   Q   Right. And the report goes on to

15   explain that heading there, does it not?

16   A   It does.

17   Q   If you'd look at the first bullet

18   point on the next page, this may be in the record

19   already but just to be clear, the last sentence of

20   that bullet point says that the production tax

21   credit will phase down the increments of 20

22   percentage points per year for projects starting

23   construction in the year 2017 (80 percent

24   production tax credit), and then 2018, 60 percent,

25   and 2019, 40 percent. Is that correct?

1   A   That's correct.

2   Q   **Could you briefly explain what an**

3 **interconnection queue is for proposed generation**

4 **projects?**

5   A   Sure. When a wind project developer

6 is planning a project and proposing to interconnect

7 it to the transmission system, they must apply for

8 interconnection. And that starts a study process,

9 they're placed in a queue of projects basically

10 that are waiting for interconnection and are going

11 through that study process, and then at the

12 successful termination of those studies there will

13 be a signing of an interconnection agreement which

14 allows the interconnection of that generator to go

15 forward.

16   Q   **Thank you. Can you turn to page 13**

17 **of the market report we've been talking about?**

18   A   Yes.

19   Q   **In the last three lines the following**

20 **statement is made: A total amount of wind, coal,**

21 **and nuclear power in the sample interconnection**

22 **queues (considering gross additions in project**

23 **dropouts) has generally declined in recent years;**

24 **whereas, natural gas and solar capacity has**

25 **increased or held steady. Is that correct?**

```
 1            A       Yeah, that's what it says.
 2            Q       Has the decline in wind generation
 3   costs over the last decade or so been due in part
 4   at least to the increasing sizes of the turbines?
 5            A       That has been a factor, yes.
 6            Q       Could you turn to page 31 of the
 7   report, please?
 8            A       Sure.
 9            Q       The dark black line on the bar chart
10   there shows the change in the size of the average
11   name plate capacity for wind turbines, does it not?
12            A       It does, yes.
13            Q       And it states beginning at line 3 of
14   that page, the average name plate capacity of newly
15   installed wind turbines has largely held steady
16   since the year 2011; is that correct?
17            A       That's correct.
18            Q       And the report we've been discussing
19   generally breaks a lot of the data down into
20   different regions of the country, does it not?
21            A       It does.
22            Q       Could you turn to page 38 of the
23   report?  That's a map there which depicts the
24   boundaries of those regions, is it not?
25            A       It does.
```

```
 1          Q      And both Missouri and Kansas are
 2   included in what they call an interior region?
 3          A      That's correct.
 4          Q      One of the issues in this case
 5   concerns the relative costs of different sources of
 6   energy available to Missouri; you are aware of
 7   that?
 8          A      Yes.
 9          Q      And would you agree in that regard
10   that the projected capacity factor of the Kansas
11   wind farms is an important consideration in
12   estimating the cost of the energy from Kansas?
13          A      Yes, it is.
14          Q      Mr. Berry uses a projected capacity
15   factor for the Kansas wind farms of 55 percent in
16   his levelized cost analysis.  Do you recall that?
17          A      Yes, I do.
18          Q      Could you turn, please, to page 42 of
19   the market report?  The graph there shows the
20   actual capacity factors for wind farms for the last
21   year that the data was available, in year 2015; is
22   that correct?
23          A      That's correct.
24          Q      And it's broken down by the year that
25   the wind project was installed?
```

1   A   That's correct.

2   Q   **So just for example, the bar on the**

3 **far left depicts capacity factors for wind farms**

4 **built in the years 1998 to 1999. Correct?**

5   A   That's correct.

6   Q   **And then on the far right are the**

7 **capacity factors for wind farms built in 2014.**

8   A   That's correct.

9   Q   **And that would be the last year for**

10 **which the data is available; correct?**

11   A   That is correct.

12   Q   **And does this chart show that not one**

13 **of the several hundred wind farms had capacity**

14 **factors of 55 percent?**

15   A   That's correct. I mean, this is data

16 for 2014 and as you can see, there's a steadily

17 increasing trend and, you know, we were -- evidence

18 I've seen, looking at production more recently

19 shows they steadily increasing trend as well. So I

20 believe a 55 percent estimate is reliable for, you

21 know, the type of wind resource that would be

22 accessed for Grain Belt.

23   I should also note that the capacity

24 factor information here includes curtailment of

25 generation, that is a major problem in western

```
 1   HBPs, and limiting the output of many of the wind

 2   projects that are included in this sample and

 3   obviously that would not be the case with wind

 4   resources that had firm transmission capacity on

 5   the Grain Belt Express line.

 6        Q    According to this chart, it does not

 7   show that -- maybe one of the wind farms achieved a

 8   50 percent capacity factor?

 9        A    That's right, there are numbers in

10   the high 40s and it looks like one is approaching

11   50 percent.

12        Q    Would you turn now to page 44 of the

13   report?

14        A    Okay, I'm there.

15        Q    Do you see the last sentence of the

16   first full paragraph there?

17        A    Yes.

18        Q    It says, "Looking ahead to 2016, 2015

19   vintage projects are likely to perform similarly to

20   those built in 2014 on average, given only modest

21   changes in these three underlying drivers among the

22   2015 fleet."

23             Do you see that?

24        A    Yes, I see that.

25        Q    Now turn to page 48 of the report.
```

1   The graph there shows a breakdown of capacity

2   factors by the various geographic regions we

3   referred to earlier; correct?

4   A   That's correct.

5   Q   And this chart includes only the

6   projects built in year 2014. Again, that's the

7   latest year for the -- for which we have available

8   data; is that correct?

9   A   That's correct.

10   Q   And if you look at the bar on the far

11   right for the region which includes Kansas, there

12   were 24 projects built that year; correct?

13   A   That's correct, yes.

14   Q   And the capacity factors shown there

15   are for the year 2015?

16   A   That's correct.

17   Q   And again, with one possible

18   exception, none of those projects had a capacity

19   factor in year 2015, which exceeds even 50 percent;

20   is that correct?

21   A   Um, no, there's one approaching 50

22   percent but not exceeding.

23   Q   If you turn to page 64 of the report,

24   please?

25   A   Okay, I'm there.

1   Q   The heading on the top of the page

2   says: The relative economic competitiveness of

3   wind power declined in the year 2015 with a drop in

4   wholesale power prices. Is that correct?

5   A   That's correct.

6   Q   And the shaded area on the chart

7   itself depicts the range in wholesale power prices;

8   is that correct?

9   A   Yes. The -- that's correct, yes.

10   Q   And the orange color shows the

11   wholesale prices in the interior region?

12   A   That's correct.

13   Q   And for the last year shown, 2015,

14   the wind PPA rose to what looks like something just

15   under $40 per megawatt hour; is that correct?

16   A   I would -- that is correct. Noting

17   the very bottom of the table shows that this was a

18   small sample size for that year. Much smaller than

19   preceding years. And so, yeah, I think appropriate

20   caveat should go with, you know, extrapolating from

21   a single year of, you know, sparse data when there

22   were larger data sets available in previous years

23   that showed lower prices.

24   Q   If you'd look at the last paragraph

25   on that page, the report says, starting in 2009,

1   however, the sharp drop in wholesale electricity

2   prices (driven primarily by lower natural gas

3   prices) squeezed average wind PPA prices out of the

4   wholesale power price range on a nationwide basis.

5   Is that correct?

6   A   That's correct.

7   Q   And then the report says, beginning

8   in the fourth line, page 65, subsequently, the

9   sharp drop in average wholesale electricity prices

10   in 2015 has made it somewhat harder for wind to

11   compete in the market. Is that correct?

12   A   That's correct. And again, this is

13   referring to the anomalous drop in natural gas

14   prices that occurred in 2015.

15   Q   One more question on this report. If

16   you turn to page 70, in the paragraph below the

17   map, the report makes the following observation:

18   Of all wind power capacity built in the United

19   States from the year 2000 through the year 2015,

20   roughly 51 percent is delivered to load-serving

21   entities with RPS obligations. In recent years,

22   however, the role of state RPS programs and driving

23   incremental wind power growth has diminished at

24   least on a national basis. Is that correct?

25   A   That's correct. Yeah, and with the

 1   key term there being "on a national basis" because

 2   the RPS programs are still critical drivers in many

 3   regions including PJM and parts of MISO as well.

 4   MR. AGATHEN: I'll offer Exhibit 374,

 5   Your Honor.

 6   JUDGE BUSHMANN: Any objections?

 7   MR. BRADY: I just -- the only

 8   objection I have is this -- a copy of this Wind

 9   Technology Report is already -- or will be moved

10   into the record as part of Infinity -- it's part of

11   Mr. Langley's testimony. He hasn't testified yet,

12   it hasn't been moved into the record, but this

13   whole report is part of his testimony.

14   JUDGE BUSHMANN: Well, since I

15   haven't -- since it's not part of the record yet, I

16   think I'll go ahead and allow this to be received

17   into the record. 374 is received.

18   Q   (BY MR. AGATHEN) You're familiar

19   with at least some of the wind data basis compiled

20   by the US Department of Energy's Natural (sic)

21   Renewable Energy Laboratory, are you not?

22   A   I am.

23   Q   And is this organization sometimes

24   referred to as simply NREL?

25   A   That's correct.

 1   Q   Do you recall testifying in the last

 2   Grain Belt case here at this Commission how the

 3   NREL data can be used to calculate a capacity

 4   factor for wind generators on a state by state

 5   basis?

 6   A   An average capacity factor, yes.

 7   Q   All right. Do you have a copy there

 8   with you of your rebuttal testimony from the last

 9   case here in Missouri?

10   A   Yes, I do.

11   Q   That's EA 2014-0207.

12   A   Yes.

13   Q   Could you turn to page 8 of that

14   testimony, please?

15   A   Okay, yes.

16   Q   Beginning at line 215, you state that

17   the NREL's database includes estimates of potential

18   wind energy production for each state as well as

19   potentially installed wind capacity; is that

20   correct?

21   A   That's correct.

22   Q   Then beginning in the middle of line

23   217, you state that the potential wind production

24   can be divided by the potential wind capacity to

25   arrive at an estimated average capacity factor for

 1   the total wind energy resources for each state; is

 2   that correct?

 3   A   That's correct.

 4   Q   It's a simple mathematical

 5   calculation basically, isn't it?

 6   A   Yes.

 7   Q   And you stated in a number of other

 8   cases how the NREL data can be used to estimate

 9   these average annual capacity factors; correct?

10   A   Yes, I have.

11   Q   I'm distributing here a copy of

12   what's been marked as Exhibit 342, and the same

13   document is Exhibit 327 from the last Grain Belt

14   case consisting of three pages and the cover is

15   entitled New US Wind Energy Potential Estimates.

16   (Wherein, Exhibit 342 was

17   introduced.)

18   Q   (BY MR. AGATHEN) Do you have a copy

19   of that document with you?

20   A   Yes, I do.

21   Q   Following your explanation of how to

22   calculate the estimated capacity factor for a given

23   state, I made some calculation shown in the

24   right-hand margin for several states on that

25   document. Do you see those?

```
 1          A      Yes, I do.

 2          Q      And based on my calculations, this

 3   data shows an estimated capacity factor for the

 4   State of Kansas of 45 percent; is that correct?

 5          A      That's what's shown, yes.

 6          Q      Does that sound correct to you?

 7          A      For this data set, I would note that

 8   this is including all land that has a capacity

 9   factor greater than 40 percent.  And the numbers

10   that I had -- the data that I had used in doing

11   those calculations for the -- my 2014 testimony had

12   a lower capacity factor cutoff.

13               Basically it allowed -- I don't know

14   exactly where the cutoff was but allowed --

15   clearly, you know, my number, my average was 33.7

16   percent for Missouri.  So it allowed areas with

17   lower wind speeds and lower capacity factors into

18   the data set.

19               Whereas, this one is excluding those

20   because it only -- it starts at 40 percent and up

21   and that has a major impact on the average you get

22   because when you have this higher threshold, a

23   state like Missouri in particular that has a major

24   impact because Missouri has only a small amount of

25   land that exceeds 40 percent.
```

 1   And as a result, the average comes

 2   out, you know, if you're only looking at areas

 3   above 40 percent the average comes out artificially

 4   high because you've limited the amount of land that

 5   -- you know, you can exclude all the lower quality

 6   wind areas from the data set.

 7   That has a less -- that exclusion has

 8   a -- tends to reduce the capacity factor in states

 9   like Kansas because they have very high quality

10   wind resources at the top end of that. But they

11   have, you know, basically the entire state is of

12   sufficient quality that it would be above 40

13   percent. So that artificially brings down their

14   average.

15   But I think when you're looking at,

16   you know, basically with a transmission line like

17   the Grain Belt Express line that's designed to

18   access the highest quality of those resources, a

19   more meaningful metric can be looking at the best

20   capacity factors in those regions.

21   And I've looked at the NREL data that

22   underlies these calculations, and when you look at

23   those numbers, it shows that the best wind

24   resources in Kansas do have a capacity factor

25   around 55 percent and those in Missouri, at best,

1   are just over 40 percent.

2   And so what we're seeing in this

3   table here because it only starts at 40 percent is

4   capturing only the best of those Missouri wind

5   resources, but for Kansas it's capturing a whole

6   range of some of the lower quality resources that,

7   you know, range down to 40 percent.

8   Q   **Well, is it fair to assume, sir, that**

9   **if you're going to build a wind farm in Missouri,**

10   **that you're going to build it in one of the better**

11   **portions of the state as far as the capacity factor**

12   **goes?**

13   A   Subject to transmission access and

14   siting considerations that, you know, as NREL notes

15   here, and as, you know, any developer would state

16   in practice, there are a number of factors that can

17   prevent you from developing the best wind

18   resources.

19   Typically you'll develop the best

20   wind resources that you can, but that means you

21   have to have the transmission, it means you have to

22   have -- you know, be able to pass any siting

23   obstacles, you have to be able to procure the land,

24   and all those criteria are actually met.

25   Q   **Given all of that, the objective**

```
 1   would be to build it in the areas with the highest

 2   wind speeds, would it not?

 3        A     If -- if you can.

 4        Q     I think I had asked you about the

 5   figure for Kansas which I believe you said sounded

 6   reasonable based on the data here.  Does the

 7   capacity factor for Iowa also look reasonable?

 8        A     The same factor that I discussed with

 9   Kansas as to why, given, you know, the range of

10   data that's covered here, you know, in the 40

11   percent threshold, yeah, I think that would also

12   apply there.

13        Q     But the math is right?

14        A     I'm sorry?

15        Q     The math is correct?

16        A     The math is correct, yes.

17        Q     And also correct for Missouri?

18        A     Yes.  Again, subject to the, you

19   know, the threshold kind of distorting the view

20   provided by that.

21        Q     Do you have with you there your

22   direct testimony for the Rock Island case at the

23   Illinois Commerce Commission, Docket Number

24   12-0560?

25        A     Yes, I do.
```

 1   Q   Your testimony there generally

 2   addressed the virtues of the wind resources in some

 3   of the MISO states; is that correct?

 4   A   That's correct.

 5   Q   Could I direct your attention,

 6   please, to page 2 of that testimony?

 7   A   Okay.

 8   Q   Beginning at line 48, you state,

 9   "Iowa, South Dakota, Nebraska, and Minnesota have

10   some of the best wind energy resources in the

11   United States"?

12   A   That's correct.

13   Q   And those are all states in the MISO

14   footprint, are they not?

15   A   Yes, they are. I would note that

16   there are in the event transmission constraints

17   that limit the deliverability of wind from those

18   states to other parts of MISO.

19   Q   Directing your attention to page 3 of

20   your testimony beginning at line 56, did you state

21   there is enough wind potential from just those four

22   states to meet the current electricity needs of the

23   US at least two times over?

24   A   Yes.

25   Q   And that those four MISO states have

```
 1    a combined wind energy potential equal to around 26

 2    percent of the total onshore wind potential in the

 3    country?

 4           A     That's correct.

 5           Q     On a different subject, do you recall

 6    testifying in a case at the Oklahoma Commission

 7    where you addressed the decision of Oklahoma Gas &

 8    Electric to exclude wind generation from

 9    consideration in its Integrated Resource Plan?

10           A     Yes.

11           Q     Oklahoma Gas & Electric is the

12    largest electric utility in that state, are they

13    not?

14           A     I believe so, yes.

15           Q     Do you have a copy of that testimony

16    with you?

17           A     I do.

18           Q     And that's dated December of 2014;

19    correct?

20           A     That's correct.

21           Q     Directing your attention to page 27

22    of your testimony.

23           A     Okay, I'm there.

24           Q     Beginning at line 1, you describe the

25    first reason given by Oklahoma Gas & Electric for
```

1   **excluding wind generation from its IRP; correct?**

2   A   That's correct.

3   **Q   And what you say there, generally, is**

4   **that OG&E concluded it should exclude wind because**

5   **SPP only recognizes approximately 5 percent of name**

6   **plate wind generation capability for capacity**

7   **margin purpose.**

8   MR. BRADY: Mr. Agathen, hold up for

9   a second because the document I have isn't matching

10   up with -- so maybe I've got the wrong -- you said,

11   is it line number 1 on that page? Or just the

12   first line on that page?

13   MR. AGATHEN: Page 27, beginning at

14   line 1.

15   MR. BRADY: Okay, because I've got

16   line number 721 at the top of page 27, you said;

17   right?

18   MR. AGATHEN: Yes.

19   A   There might be a slightly different

20   version. I see what he's referring to.

21   MR. BRADY: I think I do see it now.

22   You mentioned approximately 5 percent of name plate

23   wind generation? I think I'm on the right page

24   now. That's on my page 26. So go ahead. Sorry.

25   **Q   (BY MR. AGATHEN) Let me start over.**

1   **Generally, what you say there is that OG&E**

2   **concluded it should exclude wind because SPP only**

3   **recognizes approximately 5 percent of name plate**

4   **wind generation capability for capacity margin**

5   **purposes; is that correct?**

6   A   I -- what I say here is that that was

7   OG&E's argument and I explained that that was not

8   correct, that there was a new method at that time

9   SPP was developing that awarded simply higher

10 capacity credit and, as I explained, it's 14

11 percent is one of the numbers that comes out of

12 that new method.

13   Q   **We were just about to get to that.**

14 **Thank you.**

15   A   Okay.

16   Q   **So what does that 14 percent that you**

17 **were arguing for, what does that represent? What**

18 **does that mean?**

19   A   So that's a credited capacity, and

20 again, this is SPP's method. I think it does

21 somewhat understate the actual capacity value of

22 wind projects. Those are typically calculated

23 using an effective load carrying capability method

24 or loss of load probability method that looks more

25 at, you know, shorter periods of the year and other

 1 periods not just the peak hours of the year and

 2 calculates the total capacity value of wind across

 3 the entire year.

 4   But the both -- the old and the new

 5 method that SPP had and was proposing and then

 6 discussing in this testimony used a different

 7 method and exceed its method that is viewed as less

 8 reliable and it does tend to result in a lower

 9 capacity value accreditation than the ELCC method

10 that is generally regarded as the best.

11   Q   So, just so it's clear, even your 14

12 percent figure means that the wind generation

13 facility would be only given 14 percent of its name

14 plate rating for reliability purposes and capacity

15 planning purposes?

16   A   That's correct, but again, that

17 number -- that method that they use to arrive at

18 that 14 percent is arriving at a low number

19 relative to better methods like the effective load

20 carrying capability method.

21   Q   On a different subject, would you

22 agree that if the Grain Belt line is built, each

23 megawatt hour of wind energy from the line would in

24 fact displace a megawatt hour that would have been

25 provided by a conventional generator?

```
 1          A     That's correct.
 2          Q     Are you generally familiar with the
 3   fact that one issue in this case involves the
 4   relative costs of generation and transmission for
 5   wind projects in Kansas compared to MISO states?
 6          A     Yes.
 7          Q     You've testified in other cases
 8   involving the costs and benefits of wind generation
 9   from Iowa, have you not?
10          A     I have.
11          Q     And one of those cases was the
12   Illinois Commerce Commission case where you
13   testified on behalf of the Illinois River project?
14          A     That's correct.
15          Q     Do you have a copy of that testimony
16   with you?
17          A     I do.  One second, let me find it.
18   One second.  Okay, I have it.
19          Q     Can you explain very briefly what
20   that case was all about?
21          A     Yes.  It was in support of a AC
22   transmission project, the Illinois Rivers project,
23   that was one of the multi-value projects put
24   forward by MISO to help relieve congestion and
25   improve reliability and also support public policy
```

 1   requirements in the MISO region. And it -- those

 2   -- the project in that case crossed the state of

 3   Illinois to facilitate kind of the eastward

 4   delivery of wind resources from western MISO.

 5   **Q   And you were testifying in support of**

 6   **the line there; right?**

 7   A   That's correct.

 8   **Q   Could you turn to page 2 of your**

 9   **testimony, please?**

10   A   Yes. I'm there.

11   **Q   Starting at line 32, you testified as**

12   **follows: "By providing additional supply to the**

13   **PJM market, the Grain Belt Express project is**

14   **alleviating the high demand for PJM RECs that could**

15   **lead to higher REC prices in Illinois."**

16   A   Can you give me the line number?

17   **Q   Well, perhaps I have the wrong**

18   **document.**

19   MR. BRADY: You said it was his

20   direct testimony? Or --

21   MR. AGATHEN: One moment. I've got

22   the wrong document. One moment, excuse me. Okay,

23   Got it.

24   **Q   (BY MR. AGATHEN) Can you turn to**

25   **page 2 of your testimony?**

```
 1        A     Okay.

 2        Q     And starting at line 50.

 3        A     Okay.

 4        Q     You testified, "Illinois and the

 5  parts of MISO to the west of Illinois have some of

 6  the best wind energy resources in the United

 7  States."  Correct?

 8        A     Yes.

 9        Q     And then at page 3, beginning at line

10  61, you state:  "NREL's data indicates that North

11  Dakota, South Dakota, Minnesota, Missouri, and Iowa

12  combined have wind energy potential of 2,838,000

13  megawatts, around 34 percent of the total onshore

14  potential in the lower 48 United States, or enough

15  to meet in the lower 48 US states, or enough to

16  meet the current electricity needs of the US at

17  least two times over."  Correct?

18        A     That's correct.

19        Q     And going over to page 7, line 175,

20  you state, "MISO worked with stakeholders in the

21  RGOS," all caps, "process to identify zones where

22  future wind development is likely to occur and

23  would most cost effectively occur.  To identify the

24  most cost effective wind resource mix, the RGOS

25  analysis carefully balanced generation costs and
```

 1   transmission costs to arrive at the optimal mix of

 2   wind resources." Is that correct?

 3   A   That's correct.

 4   Q   And just by way of explanation, what

 5   is the RGOS analysis that you're referring to

 6   there?

 7   A   That was a MISO study, it was, it

 8   stands for the Regional Generation Outlet Study.

 9   It was done, I think going back to 2010 or 2011,

10   and kind of preceded the multi-value project

11   analysis.

12   Q   And down in footnote 5 of that same

13   page, you testify as follows: "The goal of the

14   RGOS analysis was to design transmission portfolios

15   that would enable RPS mandates to be met at the

16   lowest deliverable wholesale energy cost. The cost

17   calculation combined the expenses of the new

18   transmission portfolio with the kite (sic) full of

19   costs of the new renewable generation balancing the

20   tradeoffs of a lower transmission investment to

21   deliver wind from low wind availability areas,

22   typically closer to large load centers, against a

23   larger transmission investment to deliver wind from

24   higher wind availability areas, typically located

25   further from load centers." Is that correct?

```
 1       A     That's correct.  And I would note
 2  that the MVP transmission lines that were approved
 3  and are in the process of being built, there's
 4  minimal delivery of wind resources to the State of
 5  Missouri from those lines.  You know, the line that
 6  comes down, MVP 7 and 8 that comes down from Iowa
 7  into Missouri, then routes into the Illinois Rivers
 8  project and transfers that energy across Illinois
 9  and to by basically the Indiana border.  And so
10  there is not a large amount of delivery of wind to
11  Missouri from the transmission that resulted from
12  that process.
13       Q     Could you turn to page 10 of your
14  testimony there, please?
15       A     Sure.
16       Q     You see starting at line 258, you
17  state:  "As the MISO MVP project report indicates,
18  the Illinois River project and the broader MVP
19  portfolio greatly reduce consumer energy costs as
20  adjusted production cost savings are achieved
21  through reduction of transmission congestion costs
22  and more efficient use of generation resources
23  across the system."  Is that correct?
24       A     That's correct.
25       Q     And then the next paragraph you go on
```

 1 to say, "This is not surprising as the Illinois

 2 River project was designed by MISO as part of a

 3 portfolio to satisfy states' RPS requirements at

 4 the lowest cost for consumers. As the MISO MVP

 5 report explains, the goal of the RGOS analysis was

 6 to design transmission portfolios that would enable

 7 RPS mandates to be met at the lowest deliverable

 8 wholesale energy cost." Is that correct?

 9   A   That's correct.

10   MR. BRADY: Mr. Agathen -- that's all

11 right.

12   Q   (BY MR. AGATHEN) Then turning to

13 page 12, line 292, you testified, "MISO's analysis

14 found that the Illinois River project was the

15 optimal solution for resolving a number of economic

16 reliability and public policy considerations such

17 as state RPS requirements and was found to be

18 superior to alternative solutions." Is that

19 correct?

20   A   That's correct, and again, I note

21 that this is looking within MISO and the wind

22 resources that were available within MISO. It did

23 not evaluate resources from outside of the MISO

24 region.

25   Q   Sure. And turning to page 27, line

1   680, question: "Is the equitable allocation of

2   benefit to requirement for a transmission project

3   to be included in the MISO MVP portfolio?"

4   Answer: "Yes. The MVP report

5   explains that the key principle of the MISO

6   planning process is that the benefits from a given

7   transmission project must be spread commensurate

8   with its costs. The MVP cost allocation

9   methodology distributes the costs of the portfolio

10   on a load ratio share across the MISO footprint so

11   that the recommended MVP portfolio must be shown to

12   deliver a similar spread of benefits."

13   Is that accurate?

14   A   That's correct.

15   Q   On a different subject, could you

16   turn, please, to page 12 of your rebuttal

17   testimony?

18   A   In this case?

19   Q   Yes.

20   A   Okay.

21   Q   Finally, huh?

22   A   Okay, I'm there.

23   Q   With regard to your discussion there

24   at lines 237 to 241, could you briefly explain why

25   the three investor owned utilities in the western

 1   **part of state do not have a need for renewable**

 2   **energy for compliance with the RES?**

 3   A   That's simply what was indicated by

 4   their compliance plan reports. I'm not sure why

 5   that's case.

 6   Q   **They're certainly located closer to**

 7   **Kansas, are they not?**

 8   A   That's true.

 9   Q   **Could you please turn to page 14 of**

10   **your rebuttal testimony?**

11   A   Yes, I'm there.

12   Q   **In this case. With reference to line**

13   **294 there, could you please explain why capacity is**

14   **being exported by MISO utilities into PJM?**

15   A   I believe that that would simply be a

16   product of market outcomes. You know, capacity

17   would tend to follow, you know, higher prices,

18   where they're available, relative to lower prices.

19   Q   **So prices are higher in PJM than in**

20   **MISO?**

21   A   I believe so, yes. I would note that

22   the -- within MISO there are different zones. And

23   similarly within PJM, there are different zones.

24   So that's not, you know, necessarily true across

25   the entire footprint.

 1   Q   Sure. But on average, obviously, if

 2   they're exporting power to PJM, then, on average,

 3   the prices are higher in PJM than in MISO; right?

 4   A   Likely. It could be that one of the

 5   zones, or, you know, zones that happen to be right

 6   across the seam, and, you know, it could be the

 7   opposite. If that MISO, what happened to that zone

 8   happened to be higher than the adjacent PJM zone.

 9   Q   I've got just a few questions dealing

10   with your cross-surrebuttal testimony in this case,

11   Exhibit, I think it's 676. Do you have a copy of

12   that handy?

13   A   Yes, I do.

14   Q   And this may be a minor point but

15   could you turn, please, to page 3 of your

16   cross-surrebuttal?

17   A   Okay, yes.

18   Q   Line 62 you talk about a comparison

19   of CO2 emission reductions made by Mr. Jaskulski,

20   J-a-s-k-u-l-s-k-i; is that correct?

21   A   That's correct.

22   Q   He never addressed the CO2 emissions

23   issue, did he?

24   A   I believe he did.

25   Q   Okay. So you stand by that

 1   statement?

 2   A   I, that -- um, that -- that could be

 3   a mistake. Maybe it was supposed to be a reference

 4   to Mr. Shaw. That might be a mistake because it

 5   isn't a question that relates to witness Shaw's

 6   testimony.

 7   Q   Okay. So the -- Mr. Jaskulski's

 8   testimony will speak for itself then in that

 9   regard; right?

10   A   I believe so. I'd have to check.

11   Q   Near the bottom of page 9 of your

12   cross-surrebuttal testimony beginning at line 184,

13   you say that the energy provided by the Grain Belt

14   line would be at the low end of energy rates Ameren

15   Missouri charges its customers; right?

16   A   That's correct.

17   Q   When you refer to the cost of energy

18   from the Grain Belt line, are you referring to just

19   cost of the energy? Or the cost of the

20   transmission as well?

21   A   I believe that was the all-in cost.

22   Energy plus transmission.

23   Q   Is there anything else included in

24   the cost of energy from the Grain Belt line other

25   than the costs related to generation and

 1   transmission?

 2   A   I believe that's the majority of the

 3   -- the cost I'm relying on, those are the numbers

 4   that have been provided in this case by Grain Belt

 5   Express.

 6   Q   Okay. And you compare that to the

 7   Ameren rates and let's just look at the one for a

 8   summer residential rate. That's 12.0 cents per

 9   kilowatt hour; correct?

10   A   That's correct.

11   Q   Isn't it true that that rate includes

12   the cost of a wide variety of elements which aren't

13   even included in the service provided by Grain

14   Belt?

15   A   That's true. That would also

16   include, you know, distribution costs.

17   Q   And storm restoration expenses?

18   A   That's correct.

19   Q   And, of course, Grain Belt wouldn't

20   have all the holes and lines and underground

21   conduits involved in a major distribution system,

22   would it?

23   A   That's correct.

24   Q   Those costs would all be absorbed by

25   the load-serving utilities which buy the capacity;

```
 1   right?
 2        A     That's correct, and typically
 3   distribution is less than half, essentially less
 4   than half of the total delivered cost of retail
 5   rates.
 6        Q     Do the Grain Belt rates which you
 7   compare to Ameren's include the cost of bad debt
 8   write-offs?
 9        A     I'm sorry, I didn't hear, what type
10   of write-offs?  Bad debt?
11        Q     Bad debt.  Are those included in the
12   Grain Belt rates?
13        A     I'm not sure.
14        Q     But they would be included in the
15   Ameren rates, would they not?
16        A     I believe so.  They seem to be total
17   comprehensive retail rates, so yes.
18        Q     How about collection expenses?
19        A     I believe that would be in there,
20   yes, but that's typically pretty small.
21        Q     There's a whole host of different
22   expenses that are included in that Ameren rate
23   which are not included in the Grain Belt rate, are
24   they not?
25        A     That's true, but again, you know,
```

 1   generation and transmission are the large majority

 2   of retail rate costs.

 3   MR. AGATHEN: That's all I have, Your

 4   Honor. Thank you, Mr. Goggin.

 5   THE WITNESS: Okay. Thank you.

 6   JUDGE BUSHMANN: Did you intend to

 7   offer Exhibit 342?

 8   MR. AGATHEN: I did, Your Honor.

 9   Thank you.

10   JUDGE BUSHMANN: Any objections to

11   its receipt?

12   MR. BRADY: No, Your Honor.

13   MR. ROBERTSON: I'd also like to move

14   the admission of 726 the table from Ameren's RES

15   compliance plan.

16   JUDGE BUSHMANN: 342 is received.

17   Exhibit 726 has been offered. Any objections to

18   its receipt?

19   MR. BRADY: No objections.

20   JUDGE BUSHMANN: Exhibit 726 is

21   received. We're ready for questions from

22   Commissioners. No questions? Any redirect by wind

23   on the Wires?

24   MR. BRADY: Yes, Your Honor. Thank

25   you.

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1                    REDIRECT EXAMINATION

2   QUESTIONS BY MR. BRADY:

3        Q      Mr. Goggin, can you hear me?

4        A      Yes.

5        Q      Great.  Thank you.  Going back to Mr.

6   Agathen's cross-examination of you, he had asked

7   you about whether you had done specific analytical

8   -- specific analysis regarding wholesale

9   electricity prices.

10               Do you recall that, generally?

11       A      Yes, I do.  Yes.

12       Q      And do you recall what your answer

13  was to that question?

14       A      Um, I believe I said that, um, I had

15  reviewed information, um, that um, experts

16  reasonably rely on in the field and that it best

17  supported the conclusions that Grain Belt has made

18  in that case.  This case.

19       Q      Okay.  That got to my point.  Thank

20  you.  And then same with -- no, that, that is --

21  give me one second.

22               Do you, Mr. Goggin, do you have the

23  copy of the Wind Technologies Market Report that --

24  well, in front of you?

25       A      Yes.
```

1   Q   And let's see. Mr. Agathen had

2   referred to page 42, figure 32.

3   A   Okay, yes.

4   Q   And in there he had noted the

5   capacity factors for 2014. Do you see that?

6   A   Yes.

7   Q   Now, Grain Belt Express used a higher

8   capacity factor of 55 percent. Is it your -- is it

9   -- well. What other -- are there other factors

10   that you would see going forward that would account

11   for a higher capacity factor from -- in the wind

12   industry after 2014?

13   A   Certainly. As I noted in the

14   cross-examination, there is a strong upward trend

15   here in the average capacity factors. The 2012

16   installed projects came in at about 33 percent.

17   The 2013 projects came in at about 37 percent, it

18   was up 4 percent, and then the trend continuing,

19   the 2014 projects were up to about 41 percent.

20   So you see a 4 percent capacity

21   factor increase per year going from 2012 to 2014,

22   is had an increase of 8 percentage points going

23   from 33 to 41 just in those two years. And that

24   trend is continuing.

25   We're seeing the deployment of larger

 1   turbines, particularly longer rotor turbines, but

 2   also to some extent taller tower turbines that

 3   result in higher energy capture and a much higher

 4   capacity factor by capturing more wind at low wind

 5   speed periods.

 6   And that trend is continuing. We're

 7   seeing even larger rotors being installed on

 8   turbines going into the field today and, you know,

 9   that's expected to continue into the future.

10   So I believe that trend makes a 55

11   percent capacity factor assumption reasonable for

12   Kansas.

13   MR. BRADY: Thank you. No further

14   questions, Your Honor.

15   JUDGE BUSHMANN: All right, Mr.

16   Goggin, that completes your testimony. You may

17   hang up now. Thank you for your help today.

18   THE WITNESS: Thank you, Your Honor.

19   (Witness excused.)

20   JUDGE BUSHMANN: All right. We need

21   to take Mr. Shaw out of order, I believe, he has to

22   be done today. Why don't we let Mr. Shaw testify

23   next then. Then we'll go to Mr. Langley.

24   DONALD SHAW,

25   having been called as a witness, was sworn

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 1        by the Court, upon his oath, and testified

 2        as follows:

 3                      DIRECT EXAMINATION

 4  QUESTIONS BY MR. LINTON:

 5        Q      Good afternoon.  Please state your

 6  name for the record.

 7        A      Donald Shaw.

 8        Q      And who are you employed by?

 9        A      No one.

10        Q      You're retired then?

11        A      I am retired.

12               (Wherein, Exhibit 402 was

13  introduced.)

14        Q      (BY MR. LINTON)  Have you prepared

15  what has been marked as Exhibit 402?

16        A      You have to show that to me.  I'm not

17  sure which 402 is.  Yes.

18        Q      So you do have a copy of what has

19  been marked as Exhibit 402?

20        A      Yes, I do.

21        Q      And you prepared that; correct?

22        A      Yes.

23        Q      If I were to ask you the questions

24  contained in that document today, would your

25  answers be the same?
```

 1   A   That, yes, along with the

 2   supplemental answers provided in data requests

 3   afterward. There were other filings.

 4   **Q   You do not need to attest to that.**

 5   A   Okay.

 6   **Q   Do you have any corrections to make**

 7   **to that testimony?**

 8   A   No, not in the context it was made

 9   in.

10   **Q   Just to notify the Commission, Show**

11   **Me Concerned Landowners did file an errata that**

12   **changed on page 7, line 20, 2,000 divided by 35,99.**

13   **That should be 35,699.**

14   **Are your answers contained in this**

15   **document true and correct to the best of your**

16   **knowledge and belief?**

17   A   To the best of my knowledge, yes.

18   MR. LINTON: I offer Exhibit 402 into

19   evidence and tender the witness for

20   cross-examination.

21   JUDGE BUSHMANN: Any objections to

22   the receipt of that exhibit? Hearing none, it is

23   received. First cross will be Missouri Landowners.

24   MR. AGATHEN: I have no questions,

25   Your Honor.

 1   JUDGE BUSHMANN: Farm Bureau?

 2   MR. HADEN: No questions, Your Honor.

 3   JUDGE BUSHMANN: Rockies Express?

 4   MS. GIBONEY: No questions, Judge.

 5   JUDGE BUSHMANN: Commission Staff?

 6   MS. MYERS: No questions, Judge.

 7   JUDGE BUSHMANN: MIEC?

 8   MR. MILLS: No questions.

 9   JUDGE BUSHMANN: NRDC?

10   MR. ROBERTSON: No questions.

11   JUDGE BUSHMANN: Infinity Wind Power?

12   MS. PEMBERTON: No questions, thank

13   you.

14   JUDGE BUSHMANN: Wind on the Wires?

15   MR. BRADY: No questions, Your Honor.

16   JUDGE BUSHMANN: MJMEUC?

17   MR. HEALY: Just a couple, Judge.

18   CROSS-EXAMINATION

19   QUESTIONS BY MR. HEALY:

20   **Q   Mr. Shaw, how are you doing this**

21   **afternoon?**

22   A   Just fine, thank you.

23   **Q   Did you, in preparation of your**

24   **testimony, have a opportunity to review the Grain**

25   **Belt Express, MJMEUC, TSA, Transmission Service**

 1   Agreement?

 2   A   Yes.

 3   Q   Did you have an opportunity review

 4 the Iron Star, MJMEUC, power purchasing --

 5   A   Portions of it, but yes.

 6   Q   And would you agree, in combination,

 7 that's a pretty good deal for delivering energy and

 8 capacity into MISO?

 9   A   Those numbers look very low and you

10 can't blame MJMEUC for subscribing it.

11   MR. HEALY: That's all the questions

12 I have, Judge.

13   JUDGE BUSHMANN: Questions by Grain

14 Belt?

15   MR. ZOBRIST: Thank you, Judge.

16   CROSS-EXAMINATION

17 QUESTIONS BY MR. ZOBRIST:

18   Q   Mr. Shaw, you did not file any

19 surrebuttal testimony in this case, did you?

20   A   Well, I have a filing in response, I

21 think, to some questions that were raised and I'm

22 not sure what that document is but it was filed

23 with the Commission.

24   Q   Right. Well, Mr. Shaw, the only

25 document that Mr. Linton put into evidence was your

 1 rebuttal testimony marked Exhibit 402.

 2   A   Yes, and I have a copy of that here.

 3   Q   When did you learn about the Infinity

 4 Wind contract?

 5   A   It was subsequent to this filing.

 6 Later. Afterward. Yes, it was after the date of

 7 this filing.

 8   Q   Can you remember whether it was

 9 before surrebuttal testimony was due in this case?

10   A   I -- no, I don't know the answer to

11 that.

12   Q   Okay. So you did not file

13 surrebuttal testimony to discuss the need factor

14 after you became aware of the Infinity Wind

15 contract; correct?

16   A   I think there -- some of the

17 responses in the filing that is of record addresses

18 need.

19   Q   Right. But that's what I -- that's

20 my point. Exhibit 402, your rebuttal testimony,

21 did not discuss the need factor in terms of the

22 Infinity Wind contract?

23   A   No. No.

24   Q   Okay. Now, Mr. Shaw, you've overseen

25 transmission planning during your 42 years with

```
 1   Central Electric Power Cooperative; right?

 2        A    Yes, I have.

 3        Q    And is it fair to say you built the

 4   bulk of the transmission for Central Electric

 5   without having to go through an RTO process?

 6        A    Yes.

 7        Q    Now, let me just ask you a few

 8   questions based upon the DR responses that you

 9   provided in this case.

10             You testified, I believe, that you

11   have appeared in approximately 20 eminent domain

12   proceedings on behalf of Central Electric Power?

13        A    Yes, as best I can recall, yes.

14        Q    And you said in those data request

15   responses that you've testified in 12 Missouri

16   Circuit Court cases; correct?

17        A    Yes.

18        Q    Well, let me rephrase that.  You

19   couldn't tell me the number of cases except about

20   20, but you've testified in 12 circuit courts?

21        A     I have specific recollections of

22   being in those counties, in those courthouses,

23   testifying about eminent domain.

24        Q    Now, am I correct that Central

25   Electric Power did not prepare or follow any kind
```

1   of a landowner policy or protocol with regard to

2   the principles to be followed when acquiring

3   right-of-ways for its transmission projects?

4   A   There are no written such documents,

5   but we had some guidelines that we used internally,

6   yes.

7   Q   But you didn't publish a landowner

8   protocol or policy that you gave out to the people

9   whose land you --

10   A   No. No, we did not.

11   Q   Let me just finish my question, sir.

12   You did not produce to the public and issue to the

13   public a landowner protocol or policy that set

14   forth those principles; correct?

15   A   That's correct.

16   Q   And am I correct that you did not, in

17   your capacity as an officer at Central Electric

18   Power Cooperative, nor did the Cooperative itself

19   prepare or issue a code of conduct that would

20   govern the employees or the land agents who would

21   go out and talk with the public about the land that

22   you proposed to acquire?

23   A   That's correct.

24   Q   And am I also correct that Central

25   Electric Power Cooperative did not prepare any kind

1   of an agricultural impact policy or statement that

2   it made public?

3   A   That's correct.

4   Q   Now, with regard to easement

5   payments, what was the basis of the payments that

6   Central Electric would make to landowners during

7   the time that you were employed by Central

8   Electric?

9   A   There was a -- an assessment made as

10   to what the fee value of the properties were that

11   were under consideration for acquiring the

12   easements from and the negotiations then were

13   conducted on the basis of those fee values, and it

14   varied depending on the character of the land and

15   the use, what percentage of fee would actually be

16   offered as compensation for a permanent easement.

17   Q   Okay. And in the data request

18   responses you stated that the estimate range that

19   Central Electric would use was 70 percent to 110

20   percent; correct?

21   A   Yes. If you had a parcel of land

22   that had no structures on it whatsoever, just wires

23   crossing it, it might be less than 100 percent. On

24   the other hand, if the property were heavily

25   impacted by the location of structures and the

 1 placement of the easement, the -- you could go

 2 above 100 percent.

 3   Q   Now, during the period of time that

 4 you worked for Central Electric, did Central

 5 Electric offer structure payments to landowners

 6 regarding the types of transmission poles that were

 7 used in the construction of its transmission

 8 projects?

 9   A   I took that to mean in addition to

10 the per acre offer, and they weren't made in

11 combination. Some of the older easements were by

12 per pole, but it was a one-time payment.

13   Q   And so you did not make a separate

14 easement payment and then a separate structure

15 payment correct?

16   A   We did not, no.

17   Q   And I'm correct that because you had

18 no structure payment, a landowner would not be

19 given the opportunity to choose between a one-time

20 payment or periodic payments over the time period

21 when that structure was on their property?

22   A   That's correct.

23   Q   Okay. And so you didn't have a

24 periodic payment policy that included any kind of

25 an escalator; correct?

 1   A   That's correct.

 2   **Q   And am I also correct that in the**

 3   **course of acquiring property for your transmission**

 4   **lines, you did not offer landowners the opportunity**

 5   **to go to binding arbitration in lieu of eminent**

 6   **domain proceedings in Circuit Court?**

 7   A   That's correct.

 8   MR. ZOBRIST: Nothing further, Judge.

 9   JUDGE BUSHMANN: Any questions from

10   Commissioners? No. Redirect by Show Me

11   Landowners?

12   MR. LINTON: Just a couple, Your

13   Honor.

14   REDIRECT EXAMINATION

15   QUESTIONS BY MR. LINTON:

16   **Q   You received a question from Mr.**

17   **Healy regarding the Iron Star --**

18   A   Iron Star purchase of a wind project,

19   yeah.

20   **Q   And you received a question from Mr.**

21   **Zobrist regarding whether or not you filed**

22   **surrebuttal testimony. And you answered Mr.**

23   **Healy's question that it looked like a pretty good**

24   **deal?**

25   A   Yes. The numbers looked pretty

1   attractive, I guess, from a utilities perspective.

2   **Q   Does that change your judgment on the**

3   **need for the project?**

4   A   Well, the need and the economic --

5   economics, in my view, are two different things.

6   In my experience, need meant that the voltage on

7   the transmission system was inadequate to provide

8   service or that the capacity of the transmission

9   system was inadequate to provide the energy needed

10 for the customers connected. Those are the things

11 we consider to be the need and those are the

12 reasons that we would go eventually to a new

13 project was to upgrade the capacity or the

14 performance of the network.

15   I can't recall a strict economic

16 situation where we would go to do an upgrade just

17 strictly because of economics. It always almost

18 invariably involved the technical performance of

19 the grid and whether or not we could continue to

20 operate reliably and adequately without an upgrade.

21   MR. LINTON: No further questions.

22 Thank you, Mr. Shaw.

23   JUDGE BUSHMANN: Mr. Shaw, that's all

24 the testimony we need today. Thank you for your

25 support. Please step down.

 1   THE WITNESS: And thank you for

 2 taking me today instead of tomorrow. Thank you.

 3   (Witness excused.)

 4   JUDGE BUSHMANN: We're ready for Mr.

 5 Langley now.

 6   MATT LANGLEY,

 7   having been called as a witness, was sworn

 8   by the Court, upon his oath, and testified

 9   as follows:

10   DIRECT EXAMINATION

11 QUESTIONS BY MS. PEMBERTON:

12   **Q   Would you please state your name for**

13 **the record?**

14   A   Matt Langley.

15   **Q   And by whom are you employed?**

16   A   Infinity Renewables.

17   **Q   And what's your position with**

18 **Infinity?**

19   A   I'm the vice president of finance and

20 origination.

21   (Wherein, Exhibits 875 and 876 were

22 introduced.)

23   **Q   (BY MS. PEMBERTON) And in this**

24 **document did you file rebuttal testimony referenced**

25 **as Exhibit 875 and cross-surrebuttal and schedules**

 1   **referenced as Exhibit 876?**

 2   A   Yes, I did.

 3   **Q   And were those testimonies created by**

 4   **you or at your direction?**

 5   A   Yes, they were.

 6   **Q   And do you have any corrections to**

 7   **make to those testimonies?**

 8   A   No, I don't.

 9   **Q   And are your answers today, would**

10   **they still be true if I were to ask you those same**

11   **questions?**

12   A   Yes, they would be.

13   MS. PEMBERTON: I would move to admit

14   Mr. Langley's rebuttal testimony and his

15   cross-surrebuttal testimony. We have a proprietary

16   and a non-proprietary version as Exhibit,

17   respectively, 875 and 876.

18   JUDGE BUSHMANN: Am I correct that

19   the surrebuttal NP was 877? Or was that --

20   MS. PEMBERTON: My apologies. I

21   filed a amended exhibit list, so I had an error on

22   the numbering. So the correct numbering is the 875

23   is the rebuttal, and then the cross-surrebuttal

24   both will be 876, one is proprietary, one is

25   non-proprietary.

 1   JUDGE BUSHMANN: So 876 is both

 2   proprietary and NP.

 3   MS. PEMBERTON: Yes, sir. Sorry for

 4   that confusion.

 5   JUDGE BUSHMANN: Objections? Hearing

 6   none, those two exhibits are received into the

 7   record.

 8   MS. PEMBERTON: And I tender Mr.

 9   Langley for cross.

10   JUDGE BUSHMANN: First cross would be

11   Grain Belt.

12   MR. ZOBRIST: No questions, Judge.

13   JUDGE BUSHMANN: MJMEUC?

14   MR. HEALY: No question, Your Honor.

15   JUDGE BUSHMANN: Sierra Club?

16   MR. ROBERTSON: No questions.

17   JUDGE BUSHMANN: Wind on the Wires?

18   MR. BRADY: Yes, Your Honor. Thank

19   you.

20   CROSS-EXAMINATION

21   QUESTIONS BY MR. BRADY:

22   **Q   Afternoon, Mr. Langley. I'm Sean**

23   **Brady with Wind on the Wires. Can you turn to your**

24   **rebuttal testimony? Do you have that in front of**

25   **you?**

```
 1          A      I do.

 2          Q      Let's see.  Page 6, line 6.  You

 3   address -- let me know when you're there.

 4          A      I am.

 5          Q      In your testimony you address the

 6   economic feasibility of the Grain Belt project?

 7          A      Yes.

 8          Q      Turning to page 7, on line 12?

 9          A      Mm-hmm.

10          Q      You say here -- I'm sorry, let's

11   start with line 1.  You say, "The lack of

12   sufficient pathways for exporting presents

13   challenges to obtain the financing needed to

14   construct or fully develop a wind farm"?

15          A      Mm-hmm.

16          Q      Did I say that accurately?

17          A      You did.

18          Q      Line 12 to 15, you say, "If we did

19   not have the Grain Belt Express project, we would

20   have to deliver the power from our farms over the

21   existing AC systems.  The problem with the AC

22   approach is that the cost of moving power is

23   significantly higher and the way it is accomplished

24   is significantly more complicated."

25                 Did I say that correctly?
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 1          A     You did.
 2          Q     So I want to focus on "the AC
 3    approach, moving power is significantly higher."
 4    Can you explain what are the components that you're
 5    relying on when you talk about what is
 6    significantly higher?
 7          A     Sure.  And some of this was also
 8    addressed by Mr. Grotzinger earlier, but we would
 9    need to move the power from our wind farms in
10    western Kansas to the border between MISO and SPP
11    through what -- by acquiring what's called a
12    Transmission Service Request.
13                We have looked at doing that and
14    actually have gone through that process in previous
15    wind farms in SPP.  Typically, that process can
16    take up to five years to get throughout SPP system
17    with significant development expenses.  Once we
18    obtain that right, that transmission service right,
19    we then have to pay what's called a through-and-out
20    rate, and the through-and-out rate is a combination
21    of the costs incurred by SPP to move the power out
22    of the system in addition to the amortized costs of
23    any upgrades necessary with the existing AC system
24    to support that additional load coming out.
25                So, for instance, the minimum
```

1   through-and-out rate in 2012 was $878 a megawatt

2   month. So that is sort of the minimum it would

3   cost, but when you look at where we were in western

4   Kansas and the number I think that was brought up

5   earlier was that the SPP study that came back with

6   us at the time was more like $2,500 a megawatt

7   month, which is obviously a significant expense.

8   If we back calculate that into our

9   wind farm at a dollar per megawatt hour number,

10   that would essentially add an additional 9 to $13

11   per megawatt hour to the cost of the power that

12   we're generating.

13   **Q   And I guess I want to take kind of a**

14   **step back. It's -- it's my understanding that the,**

15   **and correct me if I'm wrong, the kind of the costs**

16   **in addition -- the cost for delivery, you've got**

17   **your through-and-out rate and you've got the**

18   **congestion costs.**

19   A   Mm-hmm.

20   **Q   How does the -- and you just talked**

21   **about the through-and-out rate. How does that**

22   **compare to congestion costs and relative rates?**

23   **Relativity, I guess.**

24   A   The congestion pricing is governed by

25   the SPP market and the SPP rules. Part of the

 1   challenge is that that price can change, given the

 2   characteristics of the system in that given hour.

 3   So if there were significant demand for power and

 4   very little supply, those costs would be low. If

 5   there were significant supply for power and very

 6   little demand, those costs would be high.

 7   What the TSR and through-and-out rate

 8   allows us to do is avoid those costs by agreeing to

 9   this fixed price that is -- that is guaranteed for

10   a five year period. So the challenge, if you were

11   not to get a TSR, the two issues, you don't really

12   know what those costs are because they're changing,

13   which makes it very difficult for us to finance a

14   project. Because when we go to a bank or lender,

15   the lender would say, what are your congestion

16   costs, and there's really very few people that can

17   project that further out than say a year or so.

18   What we expect is as wind continues

19   to be developed in western Kansas, because it is

20   one of the best resources for wind in the United

21   States, in fact the world, that those congestion

22   costs would actually go up, which is in fact what

23   we've seen in other markets.

24   So the other -- so -- so that the TSR

25   allows us to avoid those costs but it does so at a

 1   high cost itself. We avoid the variability by

 2   incurring a high fixed cost that we can then

 3   predict and bank against.

 4   **Q   So TSRs, you get -- is a TSR**

 5   **something you get with each -- for each segment of**

 6   **a transmission line?**

 7   A   We would need two. Well, we would

 8   need one to get out of SPP and into MISO, and then

 9   we would likely need another one from where we

10   enter the MISO market at the seam to wherever our

11   customer would be. So in the case of MJMEUC, it

12   would be them. So we would -- it's based on which

13   RTO.

14   And then the further challenge with

15   doing that is that the MISO process and the SPP

16   process are, by tariff, different. They don't

17   necessarily line up with each other. So I could be

18   in a situation where I got the SPP TSR but the MISO

19   TSR was delayed by 24 months and I'd be, you know,

20   I'd be able to get the power halfway there and then

21   have to wait another 24 months to get it all the

22   way home. Or vice versa.

23   MR. BRADY: Okay. That's all the

24   questions I have. Thank you.

25   JUDGE BUSHMANN: Questions by MIEC?

  1   MR. MILLS: No questions.

  2   JUDGE BUSHMANN: Commission Staff?

  3   MS. MYERS: No questions, Judge.

  4   JUDGE BUSHMANN: Rockies Express?

  5   MS. GIBONEY: No questions, Judge.

  6   JUDGE BUSHMANN: Show Me Landowners?

  7   MR. LINTON: Thank you, Judge, a few

  8   questions.

  9   CROSS-EXAMINATION

 10   QUESTIONS BY MR. LINTON:

 11   **Q   Good afternoon, Mr. Langley.**

 12   A   Good afternoon.

 13   **Q   Can I direct your attention to your**

 14   **cross-surrebuttal testimony?**

 15   A   Mm-hmm.

 16   **Q   Page 3. And let's see, starting at**

 17   **line 16. You say first, the 2015 Wind Technologies**

 18   **Market Report published by the Department of Energy**

 19   **shows that the capacity weighted average installed**

 20   **project cost in 2015 is $1,690 per kilowatt.**

 21   A   Mm-hmm.

 22   **Q   It says, "See page 53 as compared**

 23   **to," and I won't go any further. Then you -- you**

 24   **say further on the next page on line -- starting on**

 25   **line 1, "For ease of reference, I have also**

1   attached a copy of DOE report as Exhibit ML-2."

2   So what you're referring to in line

3   18 and 19 is provided in Exhibit ML-2; right?

4   A   Correct.

5   Q   Attached. Okay. Let's turn there.

6   And go to page small i. First page after the title

7   page. What's the first sentence in that report?

8   A   "This report is being disseminated by

9   the US Department of Energy (DOE)."

10   Q   Okay. And go down to Notice.

11   A   Uh-huh.

12   Q   Read the second sentence under the

13   Notice.

14   A   "Neither the United States government

15   or any agency thereof nor any of their employees

16   make any warranty, express or implied, or assumes

17   any legal liability or responsibility for the

18   accuracy, completeness, or usefulness of any

19   information, apparatus, product, or process

20   disclosed, or represents that its use would not

21   infringe privately owned rights."

22   Q   Turning to page 2 of the report, this

23   is in the introduction.

24   A   Okay. I'm there.

25   Q   Last paragraph on that page, the only

 1   paragraph on that page. Who is this -- who is the

 2   data supplied by for this report?

 3   A   Lawrence Berkeley National

 4   Laboratory. They get things from AWEA, the

 5   American Wind Energy Association, the US Energy

 6   Information Administration, and the Federal Energy

 7   Regulatory Commission.

 8   Q   And the data is supplied by who?

 9   A   The data are supplied by those

10   entities. Right?

11   Q   Well, go on down to where it says

12   "Data on wind, sources used in this report"? Or --

13   A   I'm sorry, so the data are supplied

14   by the American Wind Energy Association.

15   Q   Okay. Thank you very much. Turning

16   to page 53 of the report. The first sentence --

17   well, let's go up to the top of the page. What

18   does the first full sentence on that page say?

19   A   "Data sources are diverse; however,

20   and are not all of equal credibility, so emphasis

21   should be placed on overall trends in the data

22   rather than on individual project level estimates."

23   Q   Okay. Now go down to the first

24   sentence after the chart. After the figure 40.

25   A   Yeah.

1   Q   And just, is that where you got the

2   figure of $1,690 per kilowatt?

3   A   Correct. Yeah, I think that's the

4   one that I said. Yes. Correct.

5   Q   Now go to the next page. And the --

6   starting with the word "Although."

7   A   I'm sorry, what paragraph?

8   Q   The first paragraph on page 54.

9   A   Yes. Okay.

10   Q   The sentence starting with

11   "Although," take that to the end of the paragraph,

12   would you?

13   A   "Although, the EIA's capacity

14   weighted average cost for 2013 is higher than that

15   derived from our sample (which is perhaps skewed to

16   the low side by one sizeable project in a year when

17   little capacity was built) it is nevertheless

18   aligned with the declining cost trend from 2009 to

19   2015. The EIA plans to report average data for

20   2014 and 2015 later in 2016. We will include these

21   additional data points in future editions of this

22   report."

23   MR. LINTON: Thank you, Mr. Langley.

24   I have no further questions.

25   JUDGE BUSHMANN: Cross by Farm

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 1   Bureau?

 2               MR. HADEN:  None, Your Honor.

 3               JUDGE BUSHMANN:  Missouri Landowners?

 4               MR. AGATHEN:  Thank you, Your Honor.

 5               CROSS-EXAMINATION

 6   QUESTIONS BY MR. AGATHEN:

 7        Q    Good afternoon, sir.

 8        A    Good afternoon.

 9        Q    Is it fair to say that Infinity is

10   not in the business of operating wind farms?

11        A    That's correct.  Today our motto has

12   been to develop and then sell to other operators.

13        Q    So the Commission won't know who's

14   actually going to be operating the wind farm after

15   it gets built; right?

16        A    Today, no.

17        Q    You were required to post a security

18   deposit of sorts with MJMEUC, were you not?

19        A    That's correct.

20        Q    Does that have a end date or

21   expiration date to it?

22        A    Not in and of itself.  I suppose, if

23   by expiration you mean the return of, it would be

24   in the event that Grain Belt is not built.

25        Q    And is there any other end date to
```

1   **it?   Is there any other termination date to it?**

2   A   Under the contract, if, if -- 240

3   days after December 31, 2021, there is an option to

4   terminate the contract, at which point some or all

5   of that may be returned depending on damages that

6   may have occurred to date.

7   **Q   Was your bid for energy to MJMEUC**

8   **from the Iron Star project based on the assumption**

9   **that the product had already locked in 100 percent**

10   **of the investment tax credit?**

11   A   We don't use the investment tax

12   credit. We use the production tax credit. And it

13   was based on that, yes.

14   **Q   Could you explain what steps you took**

15   **to lock that in?**

16   A   We, through advice of our counsel,

17   our tax counsel, examined the guidelines that were

18   promulgated by the IRS and updated from time to

19   time since 2013, and opted to qualify the project

20   through a methodology that's commonly referred to

21   as the start of construction methodology.

22   Specifically in our case what we did

23   was procure -- the company procured 19 main power

24   transformers, the 345 kilovolt voltage, some of

25   which would be used for the Iron Star project and

1   some of its sister projects. All of that was done

2   in accordance with the guidelines issued by the

3   IRS, supported by our counsel and independent

4   engineers.

5   **Q   And have you done that for all of the**

6   **projects which would supply MJMEUC?**

7   A   For the one project, that's correct.

8   **Q   How about the other projects that**

9   **would be connected to the Grain Belt line?**

10   A   A portion of them.

11   **Q   I'm not sure what you mean.**

12   A   In -- we currently control land that

13   could supply up to 3,000 megawatts on the -- for

14   the Grain Belt Express project. We opted to

15   qualify approximately 2,000 of that.

16   MR. AGATHEN: Thank you. Your Honor,

17   that's all I have except for some questions on a

18   highly confidential document.

19   JUDGE BUSHMANN: All right. We'll go

20   into closed session. People in the audience that

21   are not authorized to listen to confidential

22   information will need to step outside, please.

23   (REPORTER'S NOTE: At this point an

24   in-camera session was held which is contained in

25   Volume 17 - Pages 1200 through 1207.)

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 1                    (REPORTER'S NOTE:  Back in open

 2    session.)

 3                    JUDGE BUSHMANN:  We're back in open

 4    session.

 5                    CROSS-EXAMINATION

 6    QUESTIONS BY CHAIRMAN HALL:

 7         Q     Good afternoon.

 8         A     Good afternoon.

 9         Q     Is the Iron Star wind project

10    constructed?

11         A     No.

12         Q     Are you waiting on resolution of this

13    case?

14         A     Yes.  In part.

15         Q     In part.  And what else?

16         A     Resolution of the case, which would

17    then allow us to finalize and execute interconnect

18    agreements with the Grain Belt Express and Clean

19    Line organization.  Once we have those in place, we

20    can begin a financing process to raise tax equity,

21    debt, the other components of the capital stack,

22    and then we would begin construction.

23         Q     And how long would all that take?

24         A     From the point, to -- to, from the --

25    let's see.  From the commencement of capital
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 1   raising until commercial operation is probably a 12

 2   to 18 month period for a project of this size.  So

 3   then we have to back in when the Commission, when

 4   this Commission approves and we can go back, you

 5   know, start from that point.

 6         Q     Okay.  So 12 to 18 months upon

 7   resolution of this case, if it's favorable to your

 8   position, you could start operation of Iron Star?

 9         A     We could, yeah, complete

10   construction, right.

11         Q     Turning to page 2 of your

12   cross-surrebuttal, you mentioned at lines 3 and 4

13   and 5 a security payment that was made to secure

14   performance into the contract?

15         A     Correct.

16         Q     Is it -- are you -- is it -- is it --

17   is this a highly confidential topic?

18               MR. HEALY:  Yes, it is HC.

19               CHAIRMAN HALL:  The amount?

20               MR. HEALY:  The amount is, yes, sir.

21               CHAIRMAN HALL:  It's the amount

22   that's --

23               MR. HEALY:  It is the amount, sir.

24   Yes, sir.

25               CHAIRMAN HALL:  I guess I want to
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  1   inquire into it so I guess we're going to need to

  2   go in camera.

  3   JUDGE BUSHMANN: For those folks who

  4   just came in --

  5   (Discussion off the record.)

  6   (REPORTER'S NOTE: At this point an

  7   in-camera session was held which is contained in

  8   Volume 17 - Pages 1211 through 1214.)

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 1   (REPORTER'S NOTE: Back in open

 2   session.)

 3   JUDGE BUSHMANN: Recross based on

 4   bench questions? And we're in open session, Grain

 5   Belt Express?

 6   MR. ZOBRIST: Just give me a moment

 7   I'm not sure. No questions, Judge.

 8   JUDGE BUSHMANN: MJMEUC?

 9   MR. HEALY: No questions, Your Honor.

10   JUDGE BUSHMANN: Sierra Club?

11   MR. ROBERTSON: No questions.

12   JUDGE BUSHMANN: Wind on the Wires?

13   MR. BRADY: No questions.

14   JUDGE BUSHMANN: Department of

15   Economic Development?

16   MR. BEAR: No questions.

17   JUDGE BUSHMANN: MIEC?

18   MR. MILLS: No questions.

19   JUDGE BUSHMANN: Commission Staff?

20   MS. MYERS: No questions, Judge.

21   JUDGE BUSHMANN: Rockies Express?

22   MS. GIBONEY: No questions, Judge.

23   JUDGE BUSHMANN: Show Me Concerned

24   Landowners?

25   MR. LINTON: Just a couple, Your

 1   Honor.

 2   RECROSS-EXAMINATION

 3   QUESTIONS BY MR. LINTON:

 4   **Q   The chairman had a question about**

 5   **what you were waiting on to proceed and you**

 6   **mentioned the approval of this Commission. What**

 7   **about the appeal of the Illinois Commerce**

 8   **Commission's decision of the Clean Line case?**

 9   A   Oh, I'm sorry, you're right, I forgot

10   about that, that that had been appealed. That's in

11   the process right now and obviously that we need to

12   wait for that to be resolved as well.

13   **Q   And then you said -- what was the**

14   **time frame that you said after -- you decided to go**

15   **ahead after you decided to go ahead, that you would**

16   **start construction, or finish?**

17   A   18 months, for this size project, 18

18   months to finish.

19   **Q   To finish. From the time you decide**

20   **to go ahead?**

21   A   Right.

22   **Q   Negotiated all the financing and**

23   **then --**

24   A   Right. That would be negotiating the

25   financing, purchasing the remainder of the

```
 1   equipment, mobiling to site, and building the

 2   project.

 3               MR. LINTON:  Thank you.

 4               JUDGE BUSHMANN:  Questions from Farm

 5   Bureau?

 6               MR. HADEN:  No, Your Honor.

 7               JUDGE BUSHMANN:  Missouri Landowners?

 8               MR. AGATHEN:  No, Your Honor.

 9               JUDGE BUSHMANN:  Redirect by

10   Infinity?

11               MS. PEMBERTON:  I think I just have a

12   couple.  Mr. Langley --

13               JUDGE BUSHMANN:  Can you come up to

14   the mic, please.

15                    REDIRECT EXAMINATION

16   QUESTIONS BY MS. PEMBERTON:

17        Q     Just briefly, you were asked earlier

18   by Show Me counsel about the 2015 Wind Technologies

19   Market Report.  Do you remember that line of

20   questioning?

21        A     I do.

22        Q     And he had you read a couple excerpts

23   into the record and my question with regard to this

24   report is what is the date that you show on the

25   front of the report?
```

 1   A   August of 2016.

 2   Q   **And to your knowledge, at the time**

 3 **you drafted your testimony, was there an updated**

 4 **version of this report out?**

 5   A   I was not aware of one at the time.

 6   Q   **Okay. And with regard to the**

 7 **entities who provide information to the government**

 8 **to help compile this report, is that information**

 9 **vetted?**

10   A   I believe so, yes. I mean, I can

11 attest to the information that AWEA collects for

12 sure and for LBNL, the Lawrence Berkeley National

13 Lab issues surveys to developers that we fill out

14 and then they triangulate that with the FER, the

15 Federal -- yeah, most of it's with FER.

16   Q   **So there is some type of reality**

17 **check, if you will, with regard to the numbers that**

18 **are submitted to compile the report?**

19   A   Yes. Yes.

20   Q   **Okay. And just to be clear with**

21 **regard to the way projects are developed and with**

22 **regard to capacity on the Grain Belt line, would it**

23 **be typical for you to enter into a TSA with Grain**

24 **Belt or would you leave that to the entity that**

25 **you're serving like you have with MJMEUC?**

 1   A   I think it will depend a lot on the

 2   type of entity with whom we transact. Obviously

 3   3,000 -- if we built all 3,000, we expect to have

 4   not only multiple customers but multiple types of

 5   customers.

 6   And so the three largest would be

 7   load-serving entities like MJMEUC, who may or may

 8   not purchase that transmission service. Corporate

 9   customers, such as some of the intervenors in this

10   case, like Walmart, who most likely would not, and

11   we would be responsible for purchasing that.

12   And then the third one would be

13   financial institutions that we would engage in

14   hedging or other bilateral financial deals with,

15   with swaps, and in that case, we would be buying

16   that capacity as well.

17   **Q   And you don't have current, any**

18   **existing TSAs in place with Grain Belt; correct?**

19   A   No, we do not.

20   **Q   Okay. And with regard to Exhibit**

21   **364, and I don't want you to talk about any of the**

22   **numbers, but can you explain to us why the price**

23   **that you may have indicated for the PJM area would**

24   **be higher than that that you had identified for the**

25   **MISO area?**

 1   A   We really broke it into a couple.

 2   One was we felt like the PJM price should be higher

 3   because, you know, because the line is longer, so

 4   they're incurring more capital costs and they

 5   obviously need to obtain a fair rate of return.

 6   The second reason is the power

 7   pricing in PJM tends to be higher, so we feel like

 8   we can charge a higher price and still be

 9   competitive in that market.

10   And then the third one is, although

11   it is a DC technology, you still incur transmission

12   losses going from this source to the sink and we

13   need a slightly higher price in order to account

14   for the additional losses or, you know, fewer

15   megawatts that ultimately make it to the customer.

16   Or megawatt hours. Excuse me.

17   MS. PEMBERTON: Okay. That's all I

18   have. Thank you.

19   JUDGE BUSHMANN: Mr. Langley, that

20   completes your testimony. You're excused.

21   THE WITNESS: Thank you, Your Honor.

22   (Witness excused.)

23   JUDGE BUSHMANN: Why don't we take a

24   break, take a recess for about 15 minutes.

25   (Short recess.)

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 1                    JUDGE BUSHMANN:  We're back on the

 2   record and ready for the first economic development

 3   witness.  Raise your right hand, please.

 4                    BARBARA MEISENHEIMER,

 5        having been called as a witness, was sworn

 6        by the Court, upon her oath, and testified

 7        as follows:

 8                    DIRECT EXAMINATION

 9   QUESTIONS BY MR. BEAR:

10        Q      This is Brian Bear on behalf of the

11   Department of Economic Development.  Could you

12   please state your name for the record?

13        A      Yes, my name is Barbara Meisenheimer.

14        Q      And how are you employed?

15        A      I am employed with the Division of

16   Energy within the Department of Economic

17   Development.  I am here today presenting testimony

18   on behalf of the Department of Economic

19   Development.

20        Q      And did you cause to be filed in this

21   proceeding written testimony in the form of

22   rebuttal testimony?

23        A      Yes, I did.

24        Q      And if I were to ask you the

25   questions that are set forth in that written
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 1 document, would your answers be the same today as

 2 it was when you filled that out?

 3   A   They would, with a couple of minor

 4 changes.

 5   Q   Could you please state which changes

 6 you would make?

 7   A   Yes. On page 6, footnote 6, the page

 8 reference should be 211.

 9   Q   Any further changes beyond that?

10   A   Yes. On page 3, line 4, to clarify

11 something that I received today to request about,

12 I'd like to change the word "Missouri" on line 4 to

13 "MISO."

14   Q   And are there any further

15 clarifications beyond that?

16   A   The only other clarification is with

17 respect to page 4, line 16, I was in the hearing

18 room when I heard cross-examination of Clean Line's

19 witnesses regarding the height of towers, and my

20 testimony is generally talking about what would be

21 typical for passing through fields, and I think

22 there was clarification that in fact there may be

23 higher towers placed to cross river -- the river.

24 Potentially other applications.

25   Q   Are there any other further

 1   **clarifications beyond that?**

 2   A   No. I am also, however, prepared to

 3   respond to Exhibit 206, which is the agreed to

 4   conditions between green -- or between Clean Line

 5   regarding the Grain Belt project and the Staff.

 6   **Q   And that's a document that was**

 7   **circulated very recently; correct?**

 8   A   Yes. I saw that during the hearing.

 9   **Q   Thank you.**

10   **(Wherein, Exhibit 525 was**

11   **introduced.)**

12   MR. BEAR: Your Honor, I would move

13   for the admission of Exhibit 525 with the

14   modifications that were just placed on the record.

15   JUDGE BUSHMANN: Any objections?

16   MR. AGATHEN: I do, Your Honor. In

17   lieu of reading the objections at this point into

18   the record, I would just offer MLA's objections

19   385.

20   JUDGE BUSHMANN: Since those have

21   been ruled previously in another order, I will

22   overrule the objections designated as MLA

23   objections number 385 and receive Exhibit 525 into

24   the record.

25   MR. BEAR: Thank you, Your Honor. I

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 1   tender the witness.

 2               JUDGE BUSHMANN:  First

 3   cross-examination would be Grain Belt Express.

 4               MR. ZOBRIST:  No questions, Judge.

 5               JUDGE BUSHMANN:  MJMEUC?

 6               MR. HEALY:  Just a couple, Judge.

 7               CROSS-EXAMINATION

 8   QUESTIONS BY MR. HEALY:

 9        Q    Miss Meisenheimer?

10        A    Hi.

11        Q    How are you today?

12        A    Good.

13        Q    Doing well.  I'd like to direct you

14   to page 6 of your rebuttal, line 8.

15        A    Yes.

16        Q    You discuss in that question and

17   answer meeting corporate goals.  Were you in the

18   courtroom earlier when MJMEUC witness, Mr.

19   Grotzinger, testified?

20        A    I think I was here for part of it.

21        Q    Okay.  Did you hear his testimony

22   regarding renewables that were offered by MoPEP and

23   the demand for those renewables by corporate

24   industrial customers?

25        A    Yes.
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 1        Q      Is that consistent with your

 2   testimony which you seem to state?

 3        A      I think it is.

 4        Q      And you think there is a need and

 5   demand for additional renewables by corporations

 6   inside these cities?

 7        A      Yes.

 8              MR. HEALY:  No further questions.

 9              JUDGE BUSHMANN:  Cross by Sierra

10   Club?

11              MR. ROBERTSON:  No questions.

12              JUDGE BUSHMANN:  Wind on the Wires?

13              MR. BRADY:  No questions, Your Honor.

14              JUDGE BUSHMANN:  Infinity Wind?

15              MS. PEMBERTON:  No questions.

16              JUDGE BUSHMANN:  MIEC?

17                 CROSS-EXAMINATION

18   QUESTIONS BY MR. MILLS:

19        Q      Good afternoon, Miss Meisenheimer.

20   Kinda seems like old times, me sitting here and you

21   sitting there, doesn't it?

22        A      Yeah.

23              MR. MILLS:  I don't have any

24   questions, Your Honor.

25              JUDGE BUSHMANN:  Commission Staff?
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 1              MS. MYERS:  Yes, Judge, just briefly.
 2    Jamie Myers on behalf Commission Staff.
 3                   CROSS-EXAMINATION
 4    QUESTIONS BY MS. MYERS:
 5         Q     Miss Meisenheimer, in regards to page
 6    11 of your rebuttal, and this is lines 15 through
 7    17, you discuss how DED was reserving the
 8    opportunity to review Staff's recommendations; is
 9    that correct?
10         A     Yes.
11         Q     And then you also mentioned upon
12    direct that you were prepared to talk about Exhibit
13    206; is that correct?
14         A     Yes.
15              (Wherein, Exhibit 206 was
16    introduced.)
17         Q     (BY MS. MYERS)  And would you like to
18    explain what Exhibit 206 is at this moment?
19         A     Sure.  Exhibit 206 is entitled
20    Conditions Agreed to by Grain Belt Express Clean
21    Line LLC and the Staff of the Missouri Public
22    Service Commission.
23         Q     And now that you have had a chance to
24    review Staff's recommendations, do you support
25    Staff's recommendations?
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 1   A   Generally, yes. There are a couple

 2 of items where I have some concern. In our

 3 position statement I think that we express support

 4 for the Staff's conditions. Since that time, the

 5 Staff has come to an agreement with Clean Line on

 6 some of the language that was in dispute previously

 7 and we were supporting the Staff's position.

 8   In particular there is, with respect

 9 to -- it's under the section 7, Landowner

10 Interactions and Right-of-way Acquisition, number

11 one relates to allowing flexibility for the line to

12 move within 500 feet, and I think that's 500 feet

13 either direction.

14   And so I wanted to just point out

15 that within my rebuttal testimony at page 4, line

16 16, from the company's routing study, they

17 projected that, I believe on their chosen path for

18 the line, that there could be 51 residences within

19 500 feet of the line. And so to allow them

20 flexibility without landowner agreement to move the

21 line as much as 500 feet in either direction seems

22 significant.

23   **Q   So, Miss Meisenheimer, bottom line,**

24 **in general, you support Staff's recommendations;**

25 **correct? In Exhibit 206?**

 1   A   Well, that was one of them I was

 2   going to talk about.

 3   **Q   That was your statement in general,**

 4   **you support, yes? You started with that statement;**

 5   **correct?**

 6   A   And I think I finished with a couple

 7   of exceptions.

 8   **Q   You did, and the exception was 500**

 9   **feet?**

10   A   That was one of the exceptions.

11   **Q   Were you also in the room when Dr.**

12   **Berry was testifying? I think it was yesterday,**

13   **but I've forgotten what day it is, honestly.**

14   A   I was in the room for some of his

15   testimony.

16   **Q   And were you here when he was**

17   **discussing that they would not go onto another**

18   **residence without approval?**

19   A   I understand that they will not go to

20   another landowner's property under the condition

21   agreed to by the Staff. But I think that this

22   allows --

23   **Q   And that doesn't alleviate any of**

24   **your concern there?**

25   MR. BEAR: Your Honor, I think the

 1   witness should be allowed to finish her answer. I

 2   think that would be fair under these circumstances.

 3   JUDGE BUSHMANN: Yeah, I think that

 4   would be good. You may finish your answer, Miss

 5   Meisenheimer.

 6   A   Okay. And I don't view those as

 7   inconsistent at all. The -- I was aware at the

 8   time when I indicated that I do have concern about

 9   this, that it would be within the same property, or

10   the same landowner's property.

11   And so I think that I still have a

12   concern to the extent that this could occur within

13   a single landowner's property and still have that

14   much leeway without some kind of either landowner

15   consent or some kind of recourse for the landowner

16   to let the Commission know that they still have

17   concerns with the line. With the location of the

18   line. As they do in this case and as they did at

19   public hearings.

20   MS. MYERS: Okay. And that's all the

21   questions I had, Miss Meisenheimer. Thank you.

22   JUDGE BUSHMANN: Rockies Express?

23   MS. GIBONEY: No questions, Judge.

24   JUDGE BUSHMANN: Show Me Concerned

25   Landowners?

 1   MR. LINTON: No questions.

 2   JUDGE BUSHMANN: Farm Bureau?

 3   CROSS-EXAMINATION

 4   QUESTIONS BY MR. HADEN:

 5   **Q   In your testimony you cited to DED**

 6   **economic study and it sets out the expectations in**

 7   **general about the other economic realities with the**

 8   **line. Correct?**

 9   A   Um, yes. I summarize findings from

10   our other witness.

11   **Q   So you didn't do that study yourself,**

12   **that's going to be the next witness; is that right?**

13   A   That's correct.

14   **Q   Okay. Do you know -- just as to your**

15   **personal knowledge, if you don't, it's fine -- who**

16   **asked DED to study this?**

17   A   I -- I was not with the department I

18   don't think at the time that that was initiated.

19   So I -- I don't know. I think he would be better

20   to answer that question.

21   MR. HADEN: Thank you, that's all I

22   had, Your Honor.

23   JUDGE BUSHMANN: Missouri Landowners?

24   MR. AGATHEN: Thank you, Your Honor,

25   I have just a few questions.

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 1                    CROSS-EXAMINATION
 2   QUESTIONS BY MR. AGATHEN:
 3         Q       Good afternoon, Miss Meisenheimer.
 4         A       Good afternoon.
 5         Q       If you turn to page 6 of your
 6   rebuttal testimony, please?  Near the top of the
 7   page you refer to the benefits of diversifying the
 8   state's energy resources; correct?
 9         A       Yes.
10         Q       And are you talking there about the
11   addition of wind generation?
12         A       Additional wind generation would be
13   one way to diversify our energy resources and I
14   think as well diversity of the infrastructure that
15   serves the state.
16         Q       Is it fair to say that the diversity
17   of benefits could be achieved by bringing in the
18   same amount of wind generation from Iowa or other
19   MISO states?
20         A       That would be an additional way to
21   diversify our portfolio.
22         Q       Or through wind farms in Missouri?
23         A       Sure.  That would be another
24   opportunity for diversification, to increase wind
25   generation.
```

 1   Q   Based on the type of analysis done by

 2 Mr. Spell, building the wind farms in Missouri

 3 would have additional economic benefits, would it

 4 not?

 5   A   It could. I would suggest that that

 6 question be directed to him.

 7   Q   At page 1 of your testimony you

 8 mention a comprehensive state energy plan; correct?

 9   A   Yes.

10   Q   Isn't one goal of that plan to

11 increase the number of wind generation facilities

12 within the State of Missouri?

13   A   I -- I think that we would be

14 supportive of that, yes.

15   Q   Isn't that one element of the plan?

16 One recommendation?

17   A   Um, I think looking for opportunities

18 to do that, yes.

19   MR. AGATHEN: That's all the

20 questions I have, Your Honor.

21   JUDGE BUSHMANN: Questions from

22 Commissioners?

23   CHAIRMAN HALL: No questions, thank

24 you.

25   COMMISSIONER STOLL: No questions,

 1   thank you.

 2   JUDGE BUSHMANN: Redirect by Economic

 3   Development?

 4   MR. BEAR: No redirect, Your Honor.

 5   JUDGE BUSHMANN: Thank you, Ms.

 6   Meisenheimer, you may step down, that completes

 7   your testimony.

 8   THE WITNESS: Thank you.

 9   (Witness excused.)

10   ALAN SPELL,

11   having been called as a witness, was sworn

12   by the Court, upon his oath, and testified

13   as follows:

14   DIRECT EXAMINATION

15   QUESTIONS BY MR. BEAR:

16   **Q   Could you state your name for the**

17   **record, please, sir?**

18   A   Alan Spell.

19   **Q   And, Mr. Spell, how are you currently**

20   **employed?**

21   A   I am the Economic & Workforce

22   Research Manager for the Department of Economic

23   Development.

24   **Q   And, sir, did you cause to be filed**

25   **in this proceeding written testimony?**

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 1          A     Yes.

 2          Q     And if I were to ask you the

 3   questions contained within that written testimony

 4   today, would your answer be the same?

 5          A     Yes.

 6                (Wherein, Exhibit 526 was

 7   introduced.)

 8                MR. BEAR:  Okay.  Your Honor, I would

 9   move for the admission of Exhibit 526 into the

10   record.

11                JUDGE BUSHMANN:  Any objections?

12                MR. AGATHEN:  I do, Your Honor, in

13   lieu of reading those into the record, I would

14   offer MLA's objections 386.

15                JUDGE BUSHMANN:  Since those have

16   already been the subject of a previous order, I

17   will overrule MLA objections designated as number

18   386 and receive Exhibit 526 into the record here.

19                MR. BEAR:  I tender the witness.

20                JUDGE BUSHMANN:  First cross would be

21   Grain Belt.

22                MR. ZOBRIST:  No questions, Judge.

23                JUDGE BUSHMANN:  MJMEUC?

24                MR. HEALY:  No questions, Your Honor.

25                JUDGE BUSHMANN:  Sierra Club?
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 1                  MR. ROBERTSON:  No questions.

 2                  JUDGE BUSHMANN:  Wind on the Wires?

 3                  MR. BRADY:  No questions.

 4                  JUDGE BUSHMANN:  Infinity Wind Power?

 5                  MS. PEMBERTON:  No questions.

 6                  JUDGE BUSHMANN:  MIEC?

 7                  MR. MILLS:  No questions.

 8                  JUDGE BUSHMANN:  Commission Staff?

 9                  MS. MYERS:  No questions, Judge.

10                  JUDGE BUSHMANN:  Rockies Express?

11                  MS. GIBONEY:  No questions, Judge.

12                  JUDGE BUSHMANN:  Show Me Landowners?

13                  MR. LINTON:  No questions.

14                  JUDGE BUSHMANN:  Farm Bureau?

15                  MR. HADEN:  I do have some questions,

16      Your Honor, thank you.

17                       CROSS-EXAMINATION

18      QUESTIONS BY MR. HADEN:

19           Q      You said you've been with the

20      Department of Economic Development since 2005; is

21      that correct?

22           A      Actually since 1999.  I started there

23      then and worked in different positions and started

24      in my current role in terms of analyzing economic

25      impacts in 2005.
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 1          Q     And what -- what's your educational
 2   background for economic analysis?
 3          A     I have a Bachelor's Degree in
 4   economics.  I have a graduate degree in landscape
 5   architecture.  I spent, in terms of experience, I
 6   spent my first part of my career in economic
 7   development as a land developer -- or land planner,
 8   sorry, and a site analyst.
 9               Coming to Missouri, I did a
10   geographic information systems works when I
11   initially got here, and then in 2005 started doing
12   impact modeling.  I actually starred out on
13   contract with the Department of Transportation to
14   do transportation studies and impacts, did that for
15   a couple years, was promoted to manager with
16   Economic & Workforce Research.
17               So I have been doing economic impact
18   modeling for about 12 years.
19          Q     Now, with the landscape architecture
20   side of your background, you have real world
21   experience in siting projects?
22          A     Yes.  Yes, I do.  I was also a
23   engineer in the National Guard, so I did work with
24   that as well.  So I -- that -- that landscape
25   architecture, it's sometimes just seen as a design,
```

 1 but it's also the groundwork and stuff like that.

 2   **Q   Have you -- do you have any**

 3 **experience in siting utility projects?**

 4   A   No, I do not.

 5   **Q   Okay. Now, the economic impact**

 6 **study, or I -- for shorthand, is it fair to call**

 7 **that what your work is in this case?**

 8   A   Yes.

 9   **Q   If you know, who asked the Department**

10 **of Economic Development to do that study?**

11   A   I don't know. I know the Director of

12 Economic Development asked me to do that study.

13   **Q   Who was that person?**

14   A   Mike Downing.

15   **Q   Is he still the director?**

16   A   Yes, acting director.

17   **Q   When did he ask you to do this study?**

18   A   I think it was the fall of 2015 was

19 the initial one, I believe. I could be wrong,

20 though. I'd have to check that.

21   **Q   And did he ask you to do that study**

22 **shortly before -- I mean, I guess let me back up.**

23   **Was that done in fairly short order**

24 **from the time he asked you to do it until the time**

25 **you finished it?**

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 1          A    I can't recall.  It -- it wasn't a

 2    quick project, but I can't recall.  I'd have to go

 3    back and look at my notes.

 4          Q      The methodology on this -- and I know

 5    you've got a segment on this, but I want to go

 6    deeper into the questions that I had on

 7    methodology.  You talk about the Regional Economics

 8    Model, Inc., model?

 9          A    Correct.

10          Q      That's REMI for short?

11          A    Yes.

12          Q      If I say REMI, we know what we're

13    talking about?

14          A    That's correct.

15          Q      That REMI model, have you had any

16    sort of, and I know it may not have been formal,

17    in-school training, but education on that, as far

18    as continuing education, since you came to DED?

19          A    Yes.  I have -- I've been trained

20    continuously on REMI.  I have attended the user

21    conferences.  I also have REMI economists that come

22    by our office regularly and we work on projects.  I

23    talked to one today on a project as a matter of

24    fact.

25                And we do hundreds of impact studies
```

 1   a year. Mostly on business cases that are coming

 2   into the state. Almost all of those projects

 3   include some construction elements, mostly vertical

 4   construction, but again, with horizontal, and by

 5   horizontal, I mean stuff like roadwork and

 6   utilities. We do have those occasionally. And so

 7   I am familiar with that.

 8   And, of course, doing the work with

 9   MoDOT, I was very familiar with some of those more

10   horizontal activities. When you're doing

11   construction like that, it's more capital

12   intensive. So it's not as labor intensive. So

13   those things will impact the model. So I know how

14   to model those.

15   **Q   Sure. Now, those -- those studies,**

16   **are they all, the REMI studies, are they always**

17   **prospective, forward-looking?**

18   A   Most of them are because it's a

19   business coming to the state, so their activities

20   aren't actually on the ground yet. Some of the

21   reports we do are looking back. So -- so, for

22   example, the quality jobs report that we do every

23   year takes information that's verified from

24   companies and we do a report with that as well.

25   **Q   When you do, and I understand, you**

 1 know, a broad -- a broad smear in terms of what the

 2 job data would look like, I understand that, but in

 3 terms of discrete projects, do you ever do

 4 backward-looking or postmortem studies on projects

 5 for which you also did prospective studies?

 6   A   Yes, the quality jobs is a perfect

 7 example. It's no longer a program that the

 8 department offers but through years 2005 to 2015,

 9 and there are still some that are being redeemed,

10 there's been hundreds of projects. We -- we

11 analyze the -- every project when it comes in

12 because it's discretionary, so we'll analyze this

13 project. So that's before it happens.

14   This annual report requires us to

15 look at those 300 plus projects and the verified

16 data that the department receives, we are able to

17 plug that in there and generate a report with that.

18 So that's a public report that's on our website.

19   Q   The projects within -- and I don't

20 want to get too far off track on that, but the

21 projects involved in that, that setup, that system

22 and that study, are those -- was that for -- it was

23 an incentive for employers to hire? Or were those

24 actual construction projects that had hard assets

25 and capital investment as well?

 1   A   Usually all the projects -- not all,

 2   that's an overstatement, but usually most of the

 3   projects have an investment phase, what we call a

 4   -- well, investment phase and an operations phase,

 5   so they are usually involving some type of building

 6   or land improvements, some purchases of capital

 7   equipment, and then jobs that are typically ramped

 8   up over a certain period of time. So that's kind

 9   of the typical business that happens.

10   **Q   With that, are you able to, I mean, I**

11   **assume in those models you do something similar to**

12   **what you did here, which is project income and tax**

13   **revenue, et cetera?**

14   A   Correct.

15   **Q   So when you go back to do your**

16   **postmortems, how do you figure out -- I mean,**

17   **because you're trying to figure out whether your**

18   **projection was correct; right?**

19   A   Well, what we're trying to figure out

20   is was the direct amount of activity that that

21   business proposed, did that -- did that happen as

22   it was expected?

23   The indirect part of that, that's the

24   -- that may be the part you're talking about. The

25   indirect part is trying to estimate by a model what

 1   those indirect spending supply chain purchases are

 2   happening. There's actually -- there's -- there's

 3   actually no way to go out and count all those

 4   people out in the economy because it's an indirect

 5   supply chain type of activity.

 6   So it estimates on average that a

 7   chemical manufacturer needs to buy other chemical

 8   manufacturing products, steel products, petroleum

 9   products, so forth, and they'll estimate jobs off

10   that. It will also estimate jobs from those

11   workers and their spending using personal

12   consumption expenditures. So every dollar that you

13   spend, you spend some on food and retail and so

14   forth.

15   So it's impossible to actually go out

16   there and check did those jobs actually happen at

17   all those places that the model would estimate. So

18   it's a -- it's a simulation of the economy. So

19   there's not a putting everybody in a room and

20   saying, yeah, we counted all of them.

21   Q   **How do they get at, if you know, how**

22   **do they get adequate controls in to figure out**

23   **whether the models actually work?**

24   A   Well, you know, you have economists

25   that obviously build these models. You have many

 1   entities that use the model and provide feedback.

 2   You -- you know, have other models, so we also have

 3   the in plan model so we know if things are

 4   consistent.

 5   Every year we get updates from REMI

 6   and when we do, we check those models for general

 7   consistency. So there's never a perfect answer.

 8   It is a simulation of the model -- or I'm sorry, of

 9   the economy, but it's just like any -- any entity

10   that's going to study something that could happen

11   in the future, you have to have these models as a

12   basis for understanding what reasonable

13   expectations you can have for development and

14   impact.

15   So the information is again updated

16   with data from the bureau of economic analysis on

17   input/output figures, income, the Census Bureau,

18   population, migration data and the BLS industry and

19   wage data. Sorry for the long-winded answer.

20   Q   No, that's okay, and I mean, we don't

21   -- I know we always have to strike a balance

22   between information and getting into a narrative

23   and so I'll try to constrain my questions enough to

24   give you easier answers, or shorter answers here.

25   But I guess the -- specifically to

1   this sort of modeling, I understand your answer,

2   you say that obviously if you generate -- if you

3   predict you'll have X gross for the actual

4   enterprise, it can be pretty easy to go verify

5   that, assuming they'll share the information with

6   you; correct? And by that I mean down chain,

7   looking backwards, if they'll tell you how much

8   money they made, it can be pretty easy to see if

9   you were right; right?

10   MR. ZOBRIST: Judge, I want to

11   object, and I apologize if I'm not hearing the

12   question right, but if we're still dealing with

13   retroactive or backward-looking studies, that's not

14   what the evidence in this case is about, so I would

15   object to relevancy for only dealing with these

16   retrospective postmortem analysis. I have no

17   problem with looking at the forward-looking ones.

18   MR. HADEN: Judge, if there's not

19   really a good way to retroactively tell whether

20   this model is actually valid, then it would be fair

21   to question its validity looking forward.

22   They've presented a scenario here

23   saying we're going to make X amount money, and they

24   do that in other cases as well, but in all these

25   other cases he's telling me it's pretty much

 1   impossible to determine what the knock on effects

 2   down chain are, so what value does this model have.

 3   JUDGE BUSHMANN: I think verifying

 4   the validity would be a reasonable inquiry, so I'll

 5   overrule the objection.

 6   Q   (BY MR. HADEN) Now, you'll see the

 7   question I'm asking you here. So you understand

 8   the question? I mean, how do we know that the

 9   modeling you're doing prospectively is valid,

10   especially as to knock on effects within the

11   economy? By that I mean not the direct, what does

12   the enterprise take down in its gross, but what

13   does the butcher and the baker and everybody down

14   chain make.

15   If it's impossible to go back and,

16   from your own testimony you said, I think, and

17   determine where that money went and whether those

18   other enterprises made money, then how do we ever

19   determine the validity of the model?

20   A   The best way that I can answer that

21   is that you have to rely on the user community, the

22   economists that use this model. All the equations

23   are published and have been reviewed in peer review

24   journals, so you rely on those, of course, experts.

25   It's used by over -- by state and local governments

 1   in over 40 states. In the State of Missouri we

 2   have used it for almost two decades. The auditor's

 3   office used to use it until they lost a person who

 4   was able to operate it.

 5   So it is -- it's a model that with

 6   the use that -- that it has with the published data

 7   that goes along with it, no model is perfect and no

 8   model can claim to know exactly what's going to

 9   happen, but it's -- it's a model that can produce

10   reasonable expectations of what is likely to

11   happen.

12   **Q   Or everybody could be wrong together,**

13   **though, couldn't they? I mean, I understand you're**

14   **saying economists review it, but that sounds more**

15   **like an appeal to the fallacy of authority.**

16   MR. BEAR: I'm going to object,

17   that's getting a little argumentative, Judge. I

18   object.

19   JUDGE BUSHMANN: I think he has

20   answered the question about validity. So to that

21   extent, I think it's ready to move on.

22   MR. HADEN: I guess a clarifying

23   question then, just so I'm clear because I think

24   there is a distinction here, if I may, Judge, and I

25   guess they could object again, but do I have a

 1   clarifying questioning.

 2   **Q   (BY MR. HADEN) As between -- you're**

 3   **saying lots of economists use it, I understand**

 4   **that. Do you know of a single time where they have**

 5   **gone into the down chain situation to see where**

 6   **else the money went after a project's been built,**

 7   **where they actually have done -- have gotten a**

 8   **controller or double blind study where they have**

 9   **been able to say -- where they did round everybody**

10   **up and say who paid who what and found that out?**

11   **Do you know?**

12   A   No.

13   **Q   Okay. All right. So to talk**

14   **specifics about this study, you said in your**

15   **testimony that you expected in the construction**

16   **phase this to create $246 million in personal**

17   **income and $476 million in GDP. Correct?**

18   A   Sounds correct.

19   **Q   Tell me the distinction between those**

20   **two numbers.**

21   A   Okay. Personal income is the -- is

22   an estimate of the wages and employee compensation

23   and any additional wage supplements that employers

24   may have. It's a concept that the Bureau of

25   Economic Analysis uses for personal income. So

 1   it's kind of like when you do your taxes and have

 2   you to report your wages and your Social Security

 3   wage and all those different distinctions, that's

 4   what that is. So it's really about wages and

 5   supplement wages and your compensation, health

 6   insurance and so forth.

 7   GDP is the -- I'm sorry, did you ask

 8   for GDP?

 9   **Q   Yes. The distinction, why is there a**

10   **difference.**

11   A   GDP is the total output expected in

12   that economy based on this direct spending, minus

13   the intermediate inputs. So it is the inputs to

14   that process. So if you're building a table and

15   you need wood, that wood is the input.

16   **Q   Now that number would be -- the**

17   **actual GDP number would be highly dependent on**

18   **where the other places the money gets spent; is**

19   **that fair?**

20   A   It follows the expected spending

21   patterns, yes.

22   **Q   Well, and so, for example, but even,**

23   **as to the Missouri economy -- well, just so I'm**

24   **clear, the $476 million GDP, that's GDP within the**

25   **Missouri economy?**

```
  1          A      That's correct.

  2          Q      So it's not a federal number?

  3          A      No.

  4          Q      Okay.  Did you study what the actual

  5    impact would be to the federal economy across the

  6    board?

  7          A      No, I do not have that model.

  8          Q      Fair enough.  So the $476 million,

  9    though, whether or not some of the intermediary

 10    products or the end product, the cash stayed in

 11    Missouri or went out of state, that can make a

 12    difference to that number; correct?

 13          A      Yes, and the model estimates that.

 14          Q      And it estimates then how much,

 15    whatever it is, how many widgets are going to be

 16    bought from some other state as opposed to within

 17    Missouri?

 18          A      It estimates how much is going to

 19    leak out of economy.  Imports and export.  So it

 20    does -- it's the idea of cross hauling.  So we make

 21    F-150s in the state but not everybody buys F-150s,

 22    so it estimates that people and companies will

 23    purchase stuff from outside the state.

 24          Q      Okay.  Now, the inputs that you use

 25    to make this determination for all the phases,
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 1   where do those -- where do the initial numbers and

 2   estimates come from for you to make your estimates?

 3         A     The initial numbers came from Clean

 4   Line, from their numbers and from the -- Dr.

 5   Linden's report.

 6         Q     Did you have direct communication

 7   with the company when you do your study?

 8         A     I had a call with Mr. Lawson to

 9   understand the timing of the construction and to

10   understand the landowner payments for that first

11   year because the operations phase, what I call the

12   operations phase, after the construction had two

13   different types of incomes, the first year expected

14   income and second year moving forward.  So that was

15   only call I had.

16         Q     Mr. Lawson or Mr. Lawlor?

17         A     I'm sorry, it may be Mr. Lawlor.

18   Mark.  Mark Lawlor.  Sorry.

19         Q     I assume that's right.  I just wanted

20   to make sure we were talking about the same person.

21   Other than speaking with him about -- from Clean

22   Line, did you speak to anybody else about these

23   inputs or these numbers that you used to make your

24   calculations?

25         A     No.
```

1   Q   And so you didn't have any other

2   competing data sets as part of your study; is that

3   fair?

4   A   I had Dr. Loomis's study and the

5   information from Clean Line; that's it.

6   Q   Do you know where Dr. Loomis got his

7   information?

8   A   I know that -- I'm sure he discussed

9   that -- those inputs with Clean Line as well to

10   understand his impact.

11   Q   So you think it's fair that all front

12   end information used in these equations came from

13   the company that's trying to build the project; is

14   that fair?

15   A   Generally sounds fair.

16   Q   You did not, and I think your

17   testimony says, I mean, you didn't take into

18   account lost activities in local economies where

19   the project will be built while it's being built;

20   is that right?

21   A   Could you clarify, what do you mean

22   by that?

23   Q   So while this project is being built,

24   I mean, sometimes in the real world you have a

25   place where you literally can't have two activities

```
 1   going on at once; correct?

 2        A    I don't know that to be the case, I'm

 3   sorry.

 4        Q    So you've worked on, for example,

 5   highways you said.  And while you're building a

 6   highway, where that's going in, there's not other

 7   economic activity going on there, is there?

 8        A    That's -- I guess I don't understand

 9   the question.  Is there -- can only one thing

10   happen in the economy at one time?

11        Q    So in this case we -- I mean, I don't

12   think it's a secret.  These easements will go over,

13   in many places, heavily agricultural areas.  Is

14   that part of your knowledge of this project?

15        A    I understand that to be the case.

16        Q    And while this project is being built

17   in those easements, farming activity is going to

18   stop.  Correct?

19        A    I would assume that would be the

20   case, it would be disruptive.

21        Q    Did you take into account as part of

22   your study what that, you know, what's the number

23   on that loss to economic activity?

24        A    I understand you now.  No, I did not

25   take that into account.
```

 1   Q   Why not?

 2   A   I didn't have that information.

 3   Q   Did you ask anybody for that

 4   information?

 5   A   No, I did not.

 6   Q   Do you know anybody that would have

 7   that information?

 8   A   No, I do not.

 9   Q   Missouri is a relatively heavy

10   agricultural state. Is there anybody at DED that

11   studies the impact of agriculture within Missouri?

12   A   We do an agri business impact

13   contribution to the state periodically. We did one

14   just a couple of years ago, I believe. But the --

15   I think to get to your direct question of do I

16   understand what that impact to those farmers would

17   have been during that time, I don't have the

18   resources to go, you know, find out what that

19   information would be.

20   I wouldn't -- it -- it is certainly

21   something I understand would be a negative impact,

22   but to quantify, that's the secondary question, and

23   so to quantify that would require me to -- to have

24   that information or -- or research that pretty

25   detailed and I didn't have that resource.

```
 1          Q      So that number could be small, you
 2    think?
 3          A      I really don't know.
 4          Q      I mean, could it be as big or bigger
 5    than the economic impact you've predicted for the
 6    project?
 7          A      In my past experience, I, and
 8    knowledge of doing impacts, I would doubt it would
 9    be more than that.
10          Q      But you don't know what it nets out
11    to?
12          A      No.
13          Q      So is this just a gross?  I mean,
14    this report, are these just gross numbers without
15    any netting back the other direction?
16          A      Well, there is -- there is a feature
17    of REMI that is unlike any other model.  It assumes
18    whenever you have an activity, you bring in people
19    from outside the area to work.  So those are called
20    economic migrants.  And those people bring in
21    families and so there is a population impact.
22                 And so when you bring in a family,
23    you have general expenditures for schooling, for
24    police services, for other general expenditures,
25    that statement account or schooling, so it does do
```

1   that. So it at least has those impacts. So it

2   does -- it nets out the, I guess, the effect, in

3   other words.

4   Q   Does it net out, though, opportunity

5   costs? You're anticipating we're getting X type of

6   economic activity, but --

7   A   What would be your opportunity cost?

8   Q   Well, here, I mean, for example, if

9   you can't farm the ground because you're putting in

10   a utility line or a, you know, you're putting in

11   Clean Line's project, there's one type of economic

12   activity been lost, another one's been put in;

13   correct?

14   A   For that term of the construction

15   where they're doing the construction, there would

16   be loss probably of, you know, the ability to farm

17   crops there, but I did not put that in my report.

18   I didn't have that information to put in there.

19   Q   And I understand that. Just so I'm

20   clear on terminology, that would be fair to call

21   that a type of opportunity cost, though; right?

22   A   Yes.

23   Q   Okay. And I am going back to like

24   tenth grade economics here, just wanted to make

25   sure I'm using the right terminology. So with that

1   opportunity cost, are there any other type of

2   opportunity costs that you considered, that --

3   non-agricultural opportunity costs, that may also

4   be incurred by this project?

5   A   No. There's -- because that term is

6   used to mean a lot of things. Opportunity cost

7   could be just keeping that money and putting it in

8   the stock market or building something somewhere

9   else. And so, you know, while it's a economic

10   concept, it's something that a lot of times really

11   relies on hard data that is hard to find, and so if

12   we don't know the opportunity cost, you really

13   can't model suggest don't know.

14   Q   Well, what's your level of confidence

15   then that Missouri is going to come out ahead with

16   this project, that being the case?

17   A   I think this will have a positive

18   benefit based on the impact from the construction

19   and the operation.

20   Q   I understand that. What's your level

21   confidence that's true?

22   A   It's pretty high.

23   Q   What, I mean, can you put a

24   percentage on it?

25   A   No.

 1   Q   Just sorta high? It feels good, like

 2   it's going to happen?

 3   A   I do many impacts and I've done them

 4   for many years and I feel like there are always

 5   things that we don't know when we do impact

 6   modeling, that's just always the case. I don't

 7   know exactly what those impacts will be, negative

 8   or positive, but I do feel like, at least in my

 9   past experience, those -- when we do find that

10   there is some other impact that might be less

11   direct, they don't seem to overweigh the larger

12   impacts.

13   Q   Which -- do you -- does DED have any

14   metrics on what its mean accuracy rate is on these

15   types of analysis over the years as you've been

16   doing them?

17   A   Mean accuracy rate.

18   Q   So let's say if you say a project is

19   going to bring in 100 million dollars and you go

20   back and do your postmortem and find out it brought

21   in 85 million or brought in 115 million. You've

22   got over or under 15 percent. If you kinda tallied

23   those up and looked and said, okay, how right --

24   what's the mean of how right we are? What would

25   you say that number is?

 1   A   I think it gets back to that first

 2   question of can we know what the economic model is,

 3   you know. Looking -- looking at all those indirect

 4   effects and spending, again we don't -- it's a

 5   simulation of the economy. So it's, by its very

 6   nature, an abstraction of the economy. We can't

 7   possibly know if all those things are exactly

 8   right.

 9   **Q   But a simulation's value is in its**

10   **predictive value; correct?**

11   A   It's in its ability, my opinion, it's

12   in its ability to give you reasonable estimates to

13   help you make decisions.

14   **Q   Right. And, I mean, I think we're**

15   **saying the same thing, its ability to accurately**

16   **predict what's going to happen?**

17   A   I don't know that prediction is the

18   right word, though, because if it can predict the

19   exact future, then I would basically be able to

20   make a lot of money off of that and I can't do that

21   with that model.

22   **Q   I understand that, and I'm not trying**

23   **to hold DED to some superhuman standard. What I'm**

24   **saying, though, is would you agree with me that you**

25   **have a model -- this happens in economics, we all**

1   know it does. You have a model that after you

2   apply it to the real world retroactive, you realize

3   it has very little value. That happens, right?

4   A   I don't know that anybody has the

5   answer to what those larger economic indirect --

6   I've never come across anyone who's done a

7   postmortem of any analysis that was able to track

8   every single thing that an economic model would

9   estimate.

10   Q   Okay. And I --

11   A   I'm not aware of it. Now, it may be

12   that there's something out there, but I'm not aware

13   of that.

14   Q   I understand that. I'm asking a more

15   basic question, though, is that the value of a

16   model in economics, it has to be tied necessarily

17   to its predictive ability; isn't that fair?

18   A   It has to be tied to does it produce

19   reasonable estimates of what you would expect to

20   happen.

21   Q   And so, I mean, if you're trying to

22   prognosticate with them, which ultimately is what

23   we're trying to do with this, you would hope that

24   it does have some relatively close tie to reality;

25   right?

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 1            A      Well, yes.

 2            Q      Okay.  So this is my problem then, is

 3    if that's true, but you're telling me nobody could

 4    -- well, it's very difficult or we don't have a way

 5    to go back and actually tell if it's true, how can

 6    we tell whether the model actually works?

 7                   MR. ZOBRIST:  Judge, objection,

 8    cumulative.  I think we've been over this like five

 9    minutes ago.

10                   MR. HADEN:  Well, first of all, this

11    not being Mr. Zobrist's witness, I don't know if

12    it's proper for him to object, and I don't know

13    what the Chair's rule is on that.

14                   JUDGE BUSHMANN:  I'll take the

15    objection.  I think you're starting to get to the

16    point where you're going over the same ground

17    again, but I'll allow one more question on that if

18    you want to.

19            Q      (BY MR. HADEN)  With that objection,

20    you need me to restate it for you?

21            A      Yes, please.

22            Q      Okay.  Here's the simplest way I can

23    ask this.  If there is not a way to tell whether

24    the model works when you look retroactively,

25    whether it's predictive, then what value does it
```

 1   **have?**

 2   A   It has value, in my opinion, of

 3   estimating what the reasonable impacts of an

 4   activity could be in your economy for a certain

 5   activity. So take -- taking a new company that

 6   comes to the state, for example, has new jobs, you

 7   can use the model to try to understand will that

 8   have different impacts by different industries in

 9   different regions and to what magnitude those

10   impacts will be. That helps in the decision-making

11   process to understand is this an activity that

12   seems like it's going to have positive outcomes?

13   The REMI model, because it does have

14   these costs that it adds in, which is unlike any

15   other model, it can sometimes tell you that an

16   activity isn't going to produce new jobs. So, for

17   example, it has displacement for jobs like retail.

18   So if we put in new retail jobs, they'll say, well,

19   you're going to also compete with other retailers.

20   So sometimes there's not a positive

21   effect. Is it 100 percent accurate, though? We

22   can never know that because we can't follow those

23   indirect and, in our terminology, intermediate

24   induced impacts because they're just so disperse.

25   We just don't have all that information.

 1   Q   Let's go back to direct impacts

 2   because I think you said it is easier to go back

 3   and look at those; correct?

 4   A   Well, sure, yes.

 5   Q   Okay. Have you followed up on any of

 6   the projects you've worked on to see whether your

 7   estimate on direct impact, how accurate -- so let's

 8   say, for example, you say a company -- this company

 9   is expected produce -- this company is expected to

10   produce X dollars of tax income for the state. Or

11   tax revenue for the state.

12   Do you go back then on those sorts of

13   estimates and look five years later and say did

14   they do that?

15   A   I -- there's two parts to that

16   answer. One is that there is -- you know, you're

17   asking about taxes. We -- we, because of

18   confidential information, we can't actually go and

19   see what somebody pays in taxes. What we can check

20   on is jobs.

21   And so, for example, with the Quality

22   Jobs Program, and the Missouri Works has set up

23   this way, too, there is required reporting of those

24   companies who receive those tax incentives to

25   report those jobs, and so they are verified.

 1   So that's a case where the department

 2   would be able to look back and say did you -- you

 3   said you were going to create 100 jobs. Did you

 4   create 100 jobs? And so that's a direct -- and

 5   also the wages that they anticipate.

 6   So that's a -- that's a way that

 7   directly the department can know. Not all programs

 8   are set up that way, but that one is.

 9   **Q   Right. So, for example, this**

10   **project, though, you won't be able -- you won't**

11   **know in your office on the back end how much tax**

12   **revenue it actually generates; right?**

13   A   We will not get a report, no.

14   **Q   And there's no way to -- and I'm not**

15   **saying there should be, to be clear, but there's no**

16   **way to force the company to produce those sorts of**

17   **records; right?**

18   A   Not that I'm aware of.

19   **Q   Now, in other projects you've worked**

20   **on, I mean, have there been any that -- any**

21   **estimates that you can look back and say we know**

22   **this was a massive failure in terms of the**

23   **projection?**

24   A   No.

25   **Q   Did you work on the Mamtek project at**

```
 1   all?

 2        A      Yes.

 3        Q      And what did the model say that was

 4   going to generate?

 5        A      I can't recall.  But the important

 6   thing about the models is, and especially with

 7   credits, a lot of the tax incentive programs, it's

 8   a performance-based program.  So if a -- for

 9   example, and this is not from that example, but,

10   for example, if the company says they are going to

11   create 100 jobs and the state says we will

12   incentivize that with a million dollars over five

13   years or whatever.  If by the end of five years

14   they created 50 jobs and they got half the

15   incentives, then it's a pretty linear equation.

16   The benefit cost ratio is what we're looking at in

17   those cases where tax revenue would be relatively

18   consistent.

19              So in the case of Mamtek you project

20   out here's what the company said they were going to

21   do and, of course, economies change and companies'

22   fortunes change, but if your incentive is

23   performance based, they don't get the incentive

24   until they perform, then those will be pretty

25   linear and our evidence is that has been the case.
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 1          Q      Okay.  So back to the basic question.
 2    Did they get anywhere close to what they were
 3    projected to bring in in that case?
 4          A      That company did not successfully
 5    come to Missouri, no.  My -- my job is to analyze
 6    the benefit cost to tax revenue.  So if they -- if
 7    they did not come and didn't produce revenue, they
 8    did not get credits.  So you got the denominator
 9    and the numerator that are both at a very -- you
10    know, zero level.
11          Q      And I understand, and I understand
12    that was also a special case that involved criminal
13    fraud.  I mean, there are a lot of different
14    factors there.  I just throw that out there as --
15    to ask.
16                 You projected the revenue into the
17    state, you're saying, because they just didn't make
18    it at all, then it doesn't go into the hopper?
19          A      Right.  Exactly.
20          Q      So talking about loss of agricultural
21    activity, I think you said you don't know what that
22    number is; correct?
23          A      Correct.
24          Q      And you don't have any way to find
25    out; right?
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 1         A      I don't have that information.

 2         Q      And you have no idea whether that

 3    activity might actually -- the lost activity might

 4    actually outstrip the economic activity created by

 5    this project?

 6                MR. ZOBRIST:  Objection, that was

 7    asked and answered about ten minutes ago.

 8                JUDGE BUSHMANN:  Sustained.

 9                MR. HADEN:  I don't know that I

10    remember the answer but if you say so, Mr. Zobrist,

11    I believe you.

12                MR. ZOBRIST:  You probably didn't

13    like the answer, so.

14         Q      (BY MR. HADEN)  As to any other lost

15    business activity, not agricultural, any other lost

16    business activity in the counties or the areas that

17    will be affected by this project?  Have you done

18    any projections on that?

19         A      No.  I don't have any information

20    about any other lost business activities.

21         Q      And then could -- I mean, you assume

22    there will be other lost business activities, not

23    agricultural, since that's been asked and answered,

24    that would also result from this project?

25         A      I don't assume any, no.
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 1          Q     So do you know that there will be or

 2    won't be, or you just don't know?

 3          A     I don't assume there will be.  I

 4    don't know.

 5          Q     But there could be.  Is that fair?

 6          A     Could be, yes.

 7          Q     Okay.  And you don't -- those aren't

 8    in the equation either; correct?

 9          A     Again, I don't have any information

10    about that.  So, no, they are not in the equation

11    because I don't have any information on that.

12          Q     Okay.  So this leads me back, and I

13    don't think I did get an answer.  Is this number a

14    gross or a net number of what's going to come into

15    the economy?  Your projection?

16          A     Which number?

17          Q     Any of them?  I know that you've got

18    various phases, but all of them you're telling me

19    don't take into account loss of agricultural

20    activity, don't take into account other lost

21    business opportunity, if it exists.

22                So is your projection as to any of

23    those phases, is that a gross number or a net

24    number to the state's economy?

25                MR. BEAR:  Your Honor, I'm going to
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1 object, I think the witness has made clear it

2 depends on the number and, you know, that's a vague

3 -- that's a vaguely constructed question as it is.

4 I think Mr. Haden wants to break it out as to each

5 number which is in his testimony, I think we'd be a

6 lot more clear in the record of the Commission.

7   JUDGE BUSHMANN: I'll let the witness

8 answer to the extent that he has knowledge of it.

9   A   Okay. So like I referred to before,

10 REMI does include what they call economic migrants.

11 It's the idea that when you stimulate an activity,

12 not all of those workers are in the local area.

13 Many of them come from other places.

14   And so it estimates how many people

15 come in. Those people bring in population. The

16 population numbers affect the general expenditures

17 to the state. So that general revenue figure is a

18 net figure.

19   Q   (BY MR. HADEN) Okay. And I

20 understand, so let's -- maybe this is definitional

21 problem then as to what grosses and nets. I

22 understand that it's got -- REMI has some netting

23 function as it involves that, but in the sense that

24 you have a number that you say Clean Line project

25 will bring into the state or how it will impact the

```
 1    state's economy.

 2         A     Correct.

 3         Q     But you have not backed out the

 4    impact of lost agricultural activity from that

 5    number; correct?

 6         A     Correct.  I did not take out lost

 7    agricultural activity.

 8         Q     And I think you've acknowledged, Mr.

 9    Zobrist has a better memory than me, but I think

10    you've acknowledged that there's at least some

11    number there; correct?

12         A     Yes.

13         Q     Okay.  And you don't know what that

14    number is; correct?

15         A     I do not know what that number is.

16         Q     So in your study that number is

17    functionally zero; correct?  The number of lost

18    activity?

19         A     Is not in there.  That's correct.

20         Q     Okay.  But in the real world that

21    number is something bigger than zero; correct?

22         A     Yes.

23         Q     Okay.  So when I'm talking about

24    grosses and nets, that's what I mean.  That number

25    in your study is being assumed to be zero but in
```

1   the real world it's not zero; correct?

2   A   That's correct, yeah, I am not taking

3   into account the lost agricultural.

4   Q   Okay. This is a long road then for

5   me to ask, is -- so how do we -- so whatever that

6   number is, that number could be the same as these

7   economic impacts here; correct?

8   MR. BEAR: Your Honor, I'll object, I

9   think he's answered that now three times at this

10   point. As to the offset with agricultural jobs.

11   JUDGE BUSHMANN: I believe he has, so

12   I'll sustain the objection.

13   MR. HADEN: Just one moment, Your

14   Honor.

15   Q   (BY MR. HADEN) I want to talk

16   briefly with you about something Ms. Meisenheimer

17   talked about in terms of the Staff conditions.

18   They're a recent development in the case. Have you

19   looked at those at all?

20   A   No, I have not.

21   Q   And so she talked -- well, were you

22   in for her testimony? I don't want to summarize if

23   you don't have knowledge of it.

24   A   I was.

25   Q   She talked about the issue with

```
 1    basically having 500 feet of leeway on either side

 2    of the line to make adjustments.  Did you hear that

 3    testimony?

 4           A     Yes, I did hear it.

 5           Q     Have you looked at that issue at all

 6    within the Staff?

 7           A     No.

 8           Q     And you don't have any knowledge of

 9    that one way or the other?

10           A     No.

11           Q     And you don't have any knowledge, you

12    don't have a position or any knowledge of DED's

13    position on that question?

14           A     No.

15                 MR. HADEN:  Okay, that's all I have,

16    Judge.

17                 JUDGE BUSHMANN:  Missouri Landowners?

18                 MR. AGATHEN:  Thank you, Your Honor.

19                 CROSS-EXAMINATION

20    QUESTIONS BY MR. AGATHEN:

21           Q     Good afternoon, Mr. Spell.

22           A     Good afternoon.

23           Q     Are you aware of the fact that if the

24    grain line project is actually built, that their

25    own studies show there is going to be a decline in
```

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 1    coal production at virtually every coal plant in

 2    Missouri?

 3         A    Am I -- I'm sorry, could you pose the

 4    question again, please?

 5         Q    Are you aware of that fact?

 6         A    And the fact is again?

 7         Q    That according to Grain Belt's own

 8    studies, there's going to be a decline in output at

 9    virtually every coal plant in Missouri.

10         A    No, I am not aware of that study.

11         Q    So that decline in output was not

12    factored into your analysis?

13         A    I did not have that information.

14         Q    Were the decline in revenues to the

15    owners of those plants factored into your analysis?

16         A    Again, I did not have that

17    information, no.

18         Q    Did you ask for it?

19         A    No.

20         Q    Do you have any estimate at all as to

21    what the loss of profits would be for the investor

22    owned utilities?

23         A    No.

24         Q    Did you make any kind of

25    investigation into how much the owners of the
```

```
 1    plants might suffer in terms of lost profits or

 2    margins for municipal systems and co-ops?

 3         A     No.

 4         Q     Could a loss of profits by a Missouri

 5    corporation lead to a reduction in state income

 6    taxes paid by that company?

 7         A     I would assume yes.

 8         Q     Was that factored into your analysis?

 9         A     No, I did not have that information.

10         Q     Did you look for it?

11         A     No.

12         Q     Did you look into the potential

13    impact on state income taxes as a result of the

14    displacement of coal generation in Missouri?

15              MR. ZOBRIST:  Asked and answered,

16    Judge.  He's already responded to that question.

17              JUDGE BUSHMANN:  Mr. Agathen, what's

18    your response?

19              MR. AGATHEN:  I didn't think he had

20    talked about state income taxes, Your Honor.

21         A     The answer is no.

22              JUDGE BUSHMANN:  Okay.  Go ahead.

23         Q     (BY MR. AGATHEN)  Did you look into

24    how much margin would be lost by the co-ops from a

25    decline in coal production at their plants?
```

```
 1          A     No.

 2          Q     Did you look at the potential impact

 3    that the reduced generation from coal plants might

 4    have on the rates paid by retail customers of

 5    investor owned co-op and municipal systems?

 6          A     No.

 7          Q     Did you look into how many jobs might

 8    be lost at the Missouri coal plants if generation

 9    there is displaced by generation from the Grain

10    Belt project?

11          A     No.

12          Q     Would your model have been capable of

13    estimating the reduction in sales and jobs at coal

14    plants in Missouri if you had the necessary input

15    data?

16          A     Yes.

17          Q     And you did not look for it?

18          A     I did not receive that information

19    and did not make any calls to inquire about that.

20          Q     Did you look at what impact the

21    displacement of coal generation by the Grain Belt

22    line might have on coal suppliers such as Peabody

23    Energy and Arch Mineral in St. Louis?

24          A     No.

25          Q     Presumably, the less coal that's
```

1   burned at these plants, the less coal they will be

2   buying from the suppliers like Peabody; correct?

3   A   That is a good assumption.

4   Q   And the less coal that's sold, the

5   lower the profits of the coal companies are likely

6   to be; right?

7   A   I would assume less sales in coal

8   would lower their profits.

9   Q   Was that factored into your analysis?

10   A   No.

11   Q   Did you look at the potential job

12   losses at coal suppliers such as Peabody and Arch

13   Mineral?

14   A   No, I did not.

15   Q   Did you look at the impact that

16   displacing coal would have on the rail lines which

17   carry coal to the plants in Missouri?

18   A   No.

19   Q   Did you look into the possibility, as

20   Grain Belt suggests, that its project could mean

21   fewer generating plants would be built in the

22   future?

23   A   No.

24   Q   Did you look into the number of

25   construction jobs which would be lost in Missouri

 1   if Grain Belt line results in fewer generating

 2   plants being built?

 3   A   No, I did not. And I am assuming

 4   that you are asking if this -- this is created,

 5   then there will be a savings to those companies who

 6   do not have to generate those, or build those new

 7   plants; is that correct?

 8   Q   I'm just asking you whether you

 9   factored it into your analysis.

10   A   Okay. No.

11   Q   Did you look at the impact on

12   property tax revenues if new construction of

13   generating plants comes to a halt?

14   A   No.

15   Q   Did you look into the possibility

16   that the Grain Belt line might mean that other

17   transmission lines might not be built in Missouri?

18   A   No.

19   Q   Or that existing lines might not be

20   upgraded?

21   A   No.

22   Q   Did you look into the number of jobs

23   which might not be created in Missouri as a result

24   of other transmission lines not being built or

25   upgraded?

```
 1          A      No.
 2          Q      Did you look into the impact on
 3   property tax revenues if those transmission lines
 4   are not built or upgraded?
 5          A      No.
 6          Q      Is it logical to assume that if an
 7   additional 500 megawatts of power delivered into
 8   Missouri by the Grain Belt line, that fewer solar
 9   generating facilities might be built in Missouri?
10          A      I don't know the answer to that.
11          Q      Did you look into that?
12          A      No.
13          Q      Did you look into the impact which
14   would result if there are fewer solar generating
15   plants built in Missouri?
16          A      No.
17          Q      How about the possibility, if the
18   Grain Belt line is built in Missouri, that fewer
19   wind farms might be built in this state?  Did you
20   look at that?
21          A      No.
22          Q      So you didn't look at the economic
23   impact that that might have as far as the lack of
24   building of new wind farms?
25          A      That would require the assumption
```

1   that I would -- that, that there's a -- an equal

2   case to be made for building a wind farm wherever

3   you want to. I don't have those expertise where

4   wind farms need to be built, so I did not factor

5   that in.

6   **Q   Did you look at how many jobs in**

7   **Missouri might be lost as a result of fewer solar**

8   **or wind facilities being built in Missouri?**

9   A   No.

10   **Q   Are you aware of the preference in**

11   **the state renewable standards for local renewable**

12   **generation in Missouri over renewable generation**

13   **imported from other states?**

14   A   I have heard of that standard before.

15   **Q   So it's certainly possible that the**

16   **approval of the Grain Belt line could have a**

17   **negative impact on the development of local**

18   **renewable generation; correct?**

19   A   I can't make that assumption. I

20   don't know that.

21   MR. BEAR: Your Honor, I was going to

22   object to that question, I think it's asking for

23   something outside his expertise, he wasn't

24   presented on that subject, and I think Mr.

25   Agathen's going outside of his expertise in asking

 1   these questions.

 2   JUDGE BUSHMANN: Well, I'll overrule

 3   the objection to the extent the witness can say if

 4   he has knowledge of that information.

 5   A   I don't have knowledge of that

 6   information.

 7   **Q   (BY MR. AGATHEN) So it was not**

 8   **factored into your analysis?**

 9   A   No.

10   **Q   Did you do any kind of analysis at**

11   **all to determine the negative impacts on jobs and**

12   **tax revenues which might result from the Grain Belt**

13   **line being built?**

14   MR. ZOBRIST: Objection, Judge, this

15   has been asked in different forms for about the

16   last five minutes. It's becoming argumentative.

17   JUDGE BUSHMANN: Sustained.

18   **Q   (BY MR. AGATHEN) Did your study**

19   **factor in the costs of the capacity of the Grain**

20   **Belt line which would be passed on by the utilities**

21   **in Missouri to the retail customers?**

22   MR. BEAR: Your Honor, I object as

23   that assumes facts not in evidence.

24   JUDGE BUSHMANN: What's your

25   response?

 1   MR. AGATHEN: There's been plenty of

 2   testimony, Your Honor, that if the line is built

 3   and it's used by utilities in Missouri to supply

 4   their retail customers, that the cost of the line

 5   would then be passed on to those retail customers.

 6   A number of witnesses have testified to that

 7   effect.

 8   JUDGE BUSHMANN: And paying for

 9   energy consumed; correct?

10   MR. AGATHEN: Correct.

11   JUDGE BUSHMANN: To that extent, I'll

12   overrule the objection. You may answer, sir, if

13   you know.

14   A   No, I do not have that information

15   and I did not have that in the impact.

16   **Q   (BY MR. AGATHEN) It was not factored**

17   **into your analysis?**

18   A   Correct.

19   **Q   Did your study factor in the**

20   **potential negative impacts on property values in**

21   **the area of the proposed line?**

22   A   No.

23   **Q   Did your study factor in the**

24   **potential negative impacts the line might have on**

25   **other businesses such as crop dusting?**

```
 1        A     No.
 2        Q     Did Grain Belt ask you to look at
 3   potential negative economic impacts which might
 4   result from the proposed line?
 5        A     Grain Belt didn't ask me for the
 6   study.  The department director did.
 7        Q     Fair enough.  Did anyone ask you to
 8   look at the potential negative impacts which might
 9   result from Grain Belt line?
10             MR. ZOBRIST:  Judge, it's been asked
11   and answered.  It's cumulative and becoming
12   argumentative.
13             JUDGE BUSHMANN:  Sustained.
14        Q     (BY MR. AGATHEN)  For any new
15   construction, whatever it is, even a bridge to
16   nowhere, your model would show an economic benefit,
17   wouldn't it?
18        A     If there is construction, it will
19   show a benefit.
20        Q     And the higher the cost of the
21   project, the more the benefits?
22        A     Yes.
23             MR. AGATHEN:  That's all I have, Your
24   Honor.
25             JUDGE BUSHMANN:  Any questions from
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 1   Commissioners?
 2                CHAIRMAN HALL:  No questions, thank
 3   you.
 4                COMMISSIONER STOLL:  No questions.
 5                JUDGE BUSHMANN:  Redirect by Economic
 6   Development?
 7                MR. BEAR:  Just a few, Your Honor.
 8                   REDIRECT EXAMINATION
 9   QUESTIONS BY MR. BEAR:
10        Q     How are you doing, Mr. Spell?
11        A     Doing well.
12        Q     Okay.  I'd like to go back through
13   some of the questions that you were asked.
14   Surprisingly, we brought up Mamtek earlier.
15               Mamtek, would you agree with me that
16   that's a unique case that involved fraud by the
17   CEO?
18        A     Yes, very much so.
19        Q     Okay.  And so your model assumes that
20   we're dealing with companies that are not engaging
21   in active securities fraud; right?
22        A     That's correct.
23        Q     Okay.  And you have no reason to
24   believe that there's active securities fraud in
25   this case?
```

 1   A   I do -- you're correct, I have no

 2   reason to believe that.

 3   **Q   Okay. You were asked as well about**

 4   **offsets that may occur with agricultural interest.**

 5   **Do you recall that, sir?**

 6   A   I do.

 7   **Q   If an interested party such as Farm**

 8   **Bureau was to provide you with data regarding**

 9   **potential losses in agricultural activity due to**

10   **Grain Belt, would you be willing to put that into**

11   **your model and submit it to the Commission?**

12   MR. HADEN: Objection, calls for

13   speculation.

14   JUDGE BUSHMANN: Can you repeat the

15   question, please?

16   MR. BEAR: Absolutely.

17   **Q   (BY MR. BEAR) If an interested party**

18   **such as Farm Bureau was to provide you with data**

19   **that would substantiate agricultural losses, would**

20   **you be willing to put that into your model and**

21   **submit that to the Commission?**

22   MR. HADEN: Hearing it a second time,

23   I'll withdraw my objection, I guess to the extent

24   it's asking him about his intentions.

25   JUDGE BUSHMANN: Very good. You may

1 answer.

2   A   Yes. I could put those inputs into

3 the model, assuming they're reasonable estimates,

4 yes.

5   **Q   (BY MR. BEAR) Okay. And you were**

6 **also asked about coal generation as well. Do you**

7 **recall that, sir?**

8   A   I do.

9   **Q   If an interested party was to present**

10 **you with data regarding potential coal losses with**

11 **current coal jobs in Missouri, would you be willing**

12 **to put that into your model and submit a version of**

13 **that to the Commission?**

14   MR. AGATHEN: Your Honor, I'm going

15 to object to this one. There's absolutely no

16 evidence that any interested party has access to

17 that data.

18   JUDGE BUSHMANN: Overruled.

19   A   Yes.

20   **Q   (BY MR. BEAR) You mentioned that you**

21 **had been running REMI for a number of years;**

22 **correct?**

23   A   Correct.

24   **Q   Are you aware of any better modeling**

25 **software available on the market right now as a**

 1 **predictive tool for economic activity?**

 2   A   I am not. I have had the benefit to

 3 use several models through my career, and REMI is

 4 the one model that has features such as the costs

 5 that I referred to earlier which no other model

 6 has, helps produce more conservative figures.

 7   It includes displacement, which no

 8 other model has. It's commercially available and

 9 that's really important to make sure we don't

10 overestimate jobs. It allows us to calibrate the

11 model each year to the state office of

12 administration, budget and expenditures, which we

13 do. Takes about a month, but we do that and test

14 it, and allows us to also have more conservative

15 numbers.

16   We have implant as well, so we're

17 able to use both of those models to make sure they

18 are consistent, but REMI is by far the preferred

19 model.

20   The Pew Center on states did research

21 a few years back and recommended that states use

22 models like REMI and end plan to understand the

23 cost benefit of their business incentives and

24 Missouri was one of the top ten states in doing

25 those cost benefit analysis.

 1   Q   And I want to break that out just so

 2   it's clear to the Commission. You mentioned REMI

 3   outputs a lot of different metrics; correct?

 4   A   Correct.

 5   Q   So, for instance, one of the metrics

 6   is revenue to the state budget; right?

 7   A   Correct.

 8   Q   And we do verify that on a basis by

 9   looking at the Office of Administration?

10   A   We -- we make sure that those revenue

11   and expenditures are calibrated to make sure that

12   they come in line with what the -- those

13   expenditures and revenues are, yes.

14   Q   And one of the metrics REMI outputs

15   is also direct benefits; correct?

16   MR. HADEN: Judge, I'm going to

17   object, and I really don't want to hold this up but

18   I'd ask that -- I mean, it's leading the witness in

19   the form of the questions.

20   JUDGE BUSHMANN: You want to rephrase

21   the question?

22   MR. BEAR: Sure.

23   Q   (BY MR. BEAR) Does REMI output

24   direct costs? Or direct benefits? You mentioned

25   indirect, direct benefits?

 1   A   Well, models -- models are really

 2   there for one thing, to estimate the indirect. You

 3   have to input the direct to -- to get the

 4   indirects.

 5   So what we do with the model is put

 6   in, in the case of most of our projects, jobs and

 7   wages, and that outputs the jobs and indirect

 8   effects and so forth.

 9   In the case of this project we had

10   spending, we had money investments. So what we do

11   is go in and put in those spending by the

12   categories and it creates -- and it does estimate

13   those -- those impacts.

14   There are direct ones. So, for

15   example, estimate the number of construction

16   workers that are needed and the number of machinery

17   manufacturing jobs needed and retail needed and so

18   forth.

19   **Q   Okay. Grain Belt had provided you**

20   **with some data that went into your modeling;**

21   **correct?**

22   A   Correct.

23   **Q   Okay. If you were to remove the**

24   **Grain Belt data, would you still be able to run a**

25   **REMI model?**

 1   A   No, I would have no direct input to

 2   put in there.

 3   **Q   Okay. So that's a necessary**

 4   **ingredient just in order to run the analysis, is to**

 5   **have numbers from somewhere?**

 6   A   Yes, you have to have a direct shock

 7   to the economy, new spending to the economy to

 8   estimate any kind of impact. Yes.

 9   **Q   Okay. And did you find any basis,**

10   **using your knowledge and expertise, to find that**

11   **Grain Belt's numbers that they provided you were**

12   **unreasonable?**

13   A   I did not believe those numbers were

14   unreasonable. I did a basic search of, you know,

15   what generally do power line construction costs

16   range from. Those numbers seemed within reason of

17   that.

18   **Q   And I know I'm never supposed to ask**

19   **a question I don't know the answer to but we were**

20   **talking about coal. You've received hundreds of**

21   **applications for new businesses over the years to**

22   **run modeling on; correct?**

23   A   Correct.

24   **Q   When is the last time you saw a coal**

25   **plant in this state?**

 1   A   I have never seen one. That I have

 2   had to model.

 3   MR. BEAR: Thank you.

 4   JUDGE BUSHMANN: Thank you for your

 5   testimony, Mr. Spell. You may be excused now.

 6   THE WITNESS: Thank you.

 7   (Witness excused.)

 8   JUDGE BUSHMANN: Why don't we go

 9   ahead and start with Staff's witnesses and see how

10   far we get.

11   MR. BEAR: Your Honor, the Department

12   is waiving the remainder of cross-examination,

13   seeing as we have no further witnesses, may I ask

14   if I be excused so I can attend other Department

15   business?

16   JUDGE BUSHMANN: Certainly, you may

17   be excused.

18   MR. BEAR: And my witnesses, Your

19   Honor?

20   JUDGE BUSHMANN: Yes.

21   MR. BEAR: Thank you very much.

22   (Mr. Brian Bear is no longer

23   present.)

24   MR. MILLS: Judge, I have had some

25   inquiries of counsel who have witnesses scheduled

 1   for tomorrow about how long we're likely to go

 2   tonight and where you think we'll end up on the

 3   schedule.

 4   JUDGE BUSHMANN: You know,

 5   considering how far behind we are, it seems

 6   physically impossible to finish today's witnesses

 7   today. I'm thinking that since, if you go too

 8   late, the evidence becomes not productive, so I

 9   think we can go for a little while longer and take

10   a witness or two, depending on how we get. And

11   then we'll have -- if the parties have witnesses

12   tomorrow that need to happen tomorrow, I would

13   suggest that you consult with each other and make

14   arrangements to rearrange the schedule.

15   It looks like we have Mr. White and

16   Mr. Chriss that are required to be tomorrow. I

17   don't know if there are any others. Depending on

18   travel arrangements, you may want to have those

19   conversations among yourselves.

20   MR. HADEN: Judge, if we could very

21   briefly on that, then, I can say Mr. Hurst actually

22   will have better availability if he doesn't go

23   tomorrow and I know he's toward the end of the

24   list.

25   JUDGE BUSHMANN: He has been waived

 1   and already had his testimony admitted.

 2   MR. HADEN: Fair enough. I thought I

 3   heard that somebody wanted it read in but if

 4   everybody's fine on that, that's even easier.

 5   JUDGE BUSHMANN: We admitted that

 6   into the record, so he's done, and I believe Mr.

 7   Parkinson has been withdrawn; is that correct?

 8   MR. HADEN: Yes, that is correct.

 9   JUDGE BUSHMANN: All right. We're

10   ready. Any other -- anybody else want to make a

11   comment about scheduling?

12   MR. AGATHEN: Yes, Your Honor, I've

13   got three witnesses coming in from out of town and

14   are probably here now already. Mr. Jaskulski, Mr.

15   Kielisch, and Don Lowenstein.

16   JUDGE BUSHMANN: We may have to take

17   the out of town witnesses out of order and do the

18   in town witnesses afterwards. I really don't see

19   how we get by not going on Monday. No matter how

20   late we go tonight or tomorrow night, I don't think

21   we can get all those done unless something dramatic

22   happens that would surprise me.

23   MR. LINTON: Let me throw one into

24   the mix too. Mr. Justis is here for Show Me and

25   would prefer to go on tomorrow if possible.

 1   JUDGE BUSHMANN: All right. Well,

 2 we'll just have to see how we go. For now, I guess

 3 let's try and get some Staff witnesses in for this

 4 evening. Miss Dietrich?

 5   NATELLE DIETRICH,

 6   having been called as a witness, was sworn

 7   by the Court, upon her oath, and testified

 8   as follows:

 9   MR. THOMPSON: Thank you, Judge.

10   DIRECT EXAMINATION

11 QUESTIONS BY MR. THOMPSON:

12   **Q   State your name, please.**

13   A   Natelle, N-a-t-e-l-l-e, Dietrich,

14 D-i-e-t-r-i-c-h.

15   **Q   I'm sorry, my name is Kevin Thompson.**

16 **How are you employed, Miss Dietrich?**

17   A   Commission Staff Director for the

18 Public Service Commission.

19   **Q   And are you the same Natelle Dietrich**

20 **who prepared or caused to be prepared rebuttal**

21 **testimony?**

22   A   Yes.

23   **Q   And you are also sponsoring, I**

24 **believe, a report marked as Staff's rebuttal**

25 **report?**

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 1          A      That's correct.

 2                 MR. THOMPSON:  And your testimony has

 3   been marked as Exhibit 200.  Pass a copy of that to

 4   the reporter.

 5                 (Wherein, Exhibit 200 was

 6   introduced.)

 7          Q      (BY MR. THOMPSON)  Now, with respect

 8   to your testimony, Exhibit 200, do you have any

 9   changes or additions to that testimony?

10          A      No, I do not.

11          Q      If I were to ask you those same

12   questions today, would your answers be the same?

13          A      Yes, they would.

14          Q      And to the best of your knowledge and

15   belief, the contents of that testimony are true and

16   correct?

17          A      That's correct.

18                 MR. THOMPSON:  I offer Staff's

19   Exhibit 200 at this time.

20                 JUDGE BUSHMANN:  Any objections?

21   Hearing none, 200 is received.

22                 (Wherein, Exhibit 201HC and NP was

23   introduced.)

24          Q      (BY MR. THOMPSON)  Now, with respect

25   to this report, Exhibit 201HC and NP, and also an
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 1   **appendix, you are sponsoring that report but you**

 2   **were not the only contributor to it, were you?**

 3   A   That's correct.

 4   **Q   Various other Staff members**

 5   **contributed to it as well as yourself?**

 6   A   That's correct.

 7   **Q   And they are also going to be**

 8   **testifying at this hearing; isn't that right?**

 9   A   Yes.

10   **Q   With respect to your contribution to**

11   **that report, do you have any corrections or**

12   **additions?**

13   A   No, I do not.

14   **Q   And if I were to ask you questions**

15   **with respect to that report, would your answers be**

16   **the same?**

17   A   Yes, they would.

18   **Q   And as far as you know, to the best**

19   **of your knowledge and belief, are the contents of**

20   **that report true and correct?**

21   A   Yes.

22   MR. THOMPSON: Your Honor, as we do

23   in rate cases with Staff reports, we'll wait to

24   offer it until all of the contributors have had a

25   chance to testify.

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 1                    JUDGE BUSHMANN:  That would be my

 2   preference too.

 3                    MR. THOMPSON:  Thank you, Judge.  At

 4   this time I will tender Ms. Dietrich for

 5   cross-examination.

 6                    JUDGE BUSHMANN:  First

 7   cross-examination will be Missouri Landowners?

 8                    MR. AGATHEN:  No questions, Your

 9   Honor.

10                    JUDGE BUSHMANN:  Show Me Landowners?

11                    MR. LINTON:  No questions.

12                    JUDGE BUSHMANN:  Farm Bureau?  Not

13   here.  Rockies Express?

14                    MS. GIBONEY:  No questions, Judge.

15                    JUDGE BUSHMANN:  MIEC?

16                    MR. MILLS:  No questions.

17                    JUDGE BUSHMANN:  NRDC?

18                    MR. ROBERTSON:  No questions.

19                    JUDGE BUSHMANN:  Infinity Wind?

20                    MS. PEMBERTON:  No questions, Judge.

21                    JUDGE BUSHMANN:  Wind on the Wires?

22                    MR. BRADY:  No questions.

23                    JUDGE BUSHMANN:  MJMEUC?

24                    MR. HEALY:  Yes, Judge, just a couple

25   of questions for Miss Dietrich.
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 1                    CROSS-EXAMINATION
 2   QUESTIONS BY MR. HEALY:
 3        Q      How are you this afternoon?
 4        A      Just fine, thank you.
 5        Q      Did you read the rebuttal and
 6   surrebuttal testimony offered by MJMEUC in this
 7   case?
 8        A      Parts of it, yes.
 9        Q      Not all of it?
10        A      Not thoroughly.
11        Q      Okay.  And did you engage in any
12   discovery, sending data requests or asking
13   questions of MJMEUC to explain their testimony?
14        A      I did not, no.
15               MR. HEALY:  No further questions of
16   this witness, Judge.
17               JUDGE BUSHMANN:  Questions by Grain
18   Belt Express?
19               MR. ZOBRIST:  We have no questions,
20   Judge.
21               JUDGE BUSHMANN:  Questions by
22   Commissions?
23               CHAIRMAN HALL:  No questions, thank
24   you.
25               COMMISSIONER STOLL:  No questions.
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  1   JUDGE BUSHMANN: Redirect by Staff?

  2   MR. THOMPSON: I have no redirect.

  3   Thank you.

  4   JUDGE BUSHMANN: Miss Dietrich, that

  5   completes your testimony.

  6   (Witness excused.)

  7   MS. MYERS: Judge, Staff would call

  8   Dave Murray.

  9   DAVID MURRAY,

 10   having been called as a witness, was sworn

 11   by the Court, upon his oath, and testified

 12   as follows:

 13   DIRECT EXAMINATION

 14   QUESTIONS BY MS. MYERS:

 15   **Q   Mr. Murray, please state your name**

 16   **for the record.**

 17   A   David Murray, M-u-r-r-a-y.

 18   **Q   Where are you employed and what is**

 19   **your job title?**

 20   A   Employed by Missouri Public Service

 21   Commission as a utility regulatory manager of the

 22   financial analysis unit.

 23   **Q   Did you prepare or cause to prepare a**

 24   **portion of Staff's rebuttal report, NP and HC,**

 25   **that's been marked as Exhibit 201?**

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 1          A     I did.

 2          Q     Do you have anything you wish to

 3   correct to that testimony?

 4          A     No.

 5          Q     With that in mind, if I asked you the

 6   same questions today, would your answers be the

 7   same?

 8          A     Yes.

 9          Q     Is the information in that document

10   correct and true to the best of your knowledge?

11          A     Yes.

12                MS. MYERS:  Your Honor, Staff tenders

13   Mr. Murray for cross.

14                JUDGE BUSHMANN:  First cross would be

15   Missouri Landowners?

16                MR. AGATHEN:  No questions, Your

17   Honor.

18                JUDGE BUSHMANN:  Show Me Landowners?

19                MR. LINTON:  No questions.

20                JUDGE BUSHMANN:  Rockies Express?

21                MS. GIBONEY:  No questions, Judge.

22                JUDGE BUSHMANN:  MIEC?

23                MR. MILLS:  No questions.

24                JUDGE BUSHMANN:  NRDC?

25                MR. ROBERTSON:  No questions.
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 1   JUDGE BUSHMANN: Infinity Wind?

 2   MS. PEMBERTON: No questions.

 3   JUDGE BUSHMANN: Wind on the Wires?

 4   MR. BRADY: No questions, Your Honor.

 5   JUDGE BUSHMANN: MJMEUC?

 6   MR. HEALY: Just a couple, Judge.

 7   CROSS-EXAMINATION

 8 QUESTIONS BY MR. HEALY:

 9   Q   **Mr. Murray, how are you this**

10 **afternoon?**

11   A   Good how are you doing?

12   Q   **Doing fine. I just want to confirm**

13 **that in the Staff report you didn't opine or give**

14 **any opinion as to the public interest of this**

15 **project; is that correct?**

16   A   I did not.

17   MR. HEALY: Okay. No further

18 questions, Judge.

19   JUDGE BUSHMANN: Questions by Grain

20 Belt Express?

21   CROSS-EXAMINATION

22 QUESTIONS BY MR. ZOBRIST:

23   Q   **Mr. Murray, is it true that the Staff**

24 **and Grain Belt Express have agreed to the financing**

25 **conditions that you recommended in the Staff**

 1   **report?**

 2   A   Yes.

 3   MR. ZOBRIST: Nothing further, Judge.

 4   JUDGE BUSHMANN: Questions from

 5   Commissioners?

 6   CHAIRMAN HALL: No questions, thank

 7   you.

 8   JUDGE BUSHMANN: Redirect by Staff?

 9   MS. MYERS: No redirect, Judge.

10   JUDGE BUSHMANN: Thank you, Mr.

11   Murray.

12   (Witness excused.)

13   SARAH KLIETHERMES,

14   having been called as a witness, was sworn

15   by the Court, upon her oath, and testified

16   as follows:

17   DIRECT EXAMINATION

18   QUESTIONS BY MR. WILLIAMS:

19   **Q   Please state and spell your name.**

20   A   Sarah Kliethermes, S-a-r-a-h

21   K-l-i-e-t-h-e-r-m-e-s.

22   **Q   Did you prepare narrative testimony**

23   **that's been included in Staff rebuttal report which**

24   **has been marked as Exhibit 201?**

25   A   Yes.

 1   Q   And are the portions of that report

 2   that is your narrative testimony appear on pages 29

 3   to 32 and 37 to 41?

 4   A   That sounds correct.

 5   Q   And does the Appendix at pages 9 to

 6   13 reflect your credentials and experience?

 7   A   That sounds correct.

 8   Q   And you verified that testimony at

 9   the time it was refiled? It was an affidavit;

10   correct?

11   A   Yes.

12   Q   And would that -- those portions of

13   that exhibit be your testimony here today or would

14   you have some changes that you would make?

15   A   There is one typographical error on

16   page --

17   Q   Where does that appear?

18   A   Page 40, of the bottom of the third

19   paragraph, the statement is "This would increase

20   reserve margin requirements." The word "margin"

21   should be struck.

22   Q   Is that the only change?

23   A   Yes.

24   MR. ZOBRIST: Could you give me that

25   line again, please? Or area?

 1   MR. WILLIAMS: Here.

 2   MR. ZOBRIST: Thank you.

 3   **Q   (BY MR. WILLIAMS) With that change,**

 4   **are those pages of what's been marked as Exhibit**

 5   **Number 201, and this is an HC and a public version**

 6   **of that document, your testimony here today?**

 7   A   Yes.

 8   MR. WILLIAMS: With that, I tender

 9   the witness.

10   JUDGE BUSHMANN: First cross would be

11   Missouri Landowners.

12   MR. AGATHEN: No questions, Your

13   Honor.

14   JUDGE BUSHMANN: Show Me Landowners?

15   MR. LINTON: No questions.

16   JUDGE BUSHMANN: Rockies Express?

17   MS. GIBONEY: No questions, Judge.

18   JUDGE BUSHMANN: MIEC?

19   MR. MILLS: No questions.

20   JUDGE BUSHMANN: NRDC?

21   MR. ROBERTSON: No questions.

22   JUDGE BUSHMANN: Infinity Wind Power?

23   MS. PEMBERTON: No questions, Judge.

24   JUDGE BUSHMANN: Wind on the Wires?

25   MR. BRADY: No questions.

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 1                   JUDGE BUSHMANN:  MJMEUC?

 2                   MR. HEALY:  Just a couple of

 3  questions, Judge.

 4                   CROSS-EXAMINATION

 5  QUESTIONS BY MR. HEALY:

 6        Q     Miss Kliethermes, how are you this

 7  afternoon?

 8        A     Good, yourself?  Thanks.

 9        Q     I'd like to direct you to page 37 of

10  the Staff report and it is titled towards the

11  bottom of that page, Public Interest?  Actually

12  it's number 5, Public Interest?

13        A     Yes.

14        Q     And is that a section of the Staff

15  report that you caused to be prepared?

16        A     It is -- I'm not certain if it was in

17  its entirety, but yes.

18        Q     Okay.  Are you the correct person to

19  ask questions to about that?

20        A     I believe so.  There may be specific

21  paragraphs that were handled by another witness.

22        Q     Okay.

23        A     As identified.

24        Q     Okay.  When preparing this, did you

25  review the Grain Belt, MJMEUC, Transmission Service
```

 1   **Agreement prior to preparing this?**

 2   A   I don't believe as it pertains to the

 3   public interest portion.

 4   **Q   Okay.**

 5   A   I would have -- I would have reviewed

 6   either the contract or the draft contract. I do

 7   not recall if it had been finalized at that point

 8   or not.

 9   **Q   Okay. Did you review the rebuttal**

10   **testimony filed by MJMEUC in this case?**

11   A   Prior to filing my rebuttal

12   testimony? No.

13   **Q   Okay. After filing it?**

14   A   Yes.

15   **Q   And did you review the surrebuttal**

16   **testimony filed by MJMEUC in this case?**

17   A   I know I looked at it. I don't

18   recall if I looked at it in detail.

19   **Q   Okay. And you did not file any**

20   **surrebuttal; is that correct?**

21   A   I did not.

22   **Q   Were you present this morning when**

23   **Mr. Grotzinger was testifying?**

24   A   For much of it.

25   **Q   Okay. And did you hear discussion of**

 1   **Schedule JG-3? That was the SPP to MISO versus the**

 2   **Grain Belt Express transmission path?**

 3   A   I heard some of that discussion, yes.

 4   **Q   And would you generally agree with**

 5   **his analysis?**

 6   A   I don't have an opinion.

 7   **Q   Okay. Did you cause to be issued any**

 8   **data request to MJMEUC regarding claims made in**

 9   **rebuttal or surrebuttal testimony?**

10   A   I don't believe so.

11   MR. HEALY: No further questions,

12   Judge.

13   JUDGE BUSHMANN: Questions by Grain

14   Belt Express?

15   MR. ZOBRIST: Thank you, Judge.

16   CROSS-EXAMINATION

17   QUESTIONS BY MR. ZOBRIST:

18   **Q   Am I correct that Staff did not**

19   **conduct a loss of load expectation study in this**

20   **case?**

21   A   I wouldn't have been the witness to

22   do that but I don't believe we did, no.

23   **Q   And to your knowledge, did Staff**

24   **retain a third party to conduct such an analysis?**

25   A   Not to my knowledge.

 1   Q   Now, am I also correct that Staff

 2   itself did not prepare a production cost model

 3   analysis similar to what Mr. Copeland prepared?

 4   A   Staff did not do a production cost

 5   analysis.

 6   Q   And you didn't retain any third party

 7   to conduct such an analysis; correct?

 8   A   Not to my knowledge.

 9   Q   Now, did have you an opportunity to

10   meet with Mr. Copeland about the inputs that he

11   used in his production cost analysis?

12   A   Prior to the filing of the case,

13   correct.

14   Q   Do you know on how many occasions you

15   or members of Staff met with Mr. Copeland to

16   discuss those inputs?

17   A   After the issuance of the report and

18   order in the prior case and prior to the filing of

19   this case I believe we met twice, although I am not

20   certain on that. There may have been some

21   telephone calls or e-mails exchanged as well.

22   Q   Okay. Now, do you have any DR

23   responses to Grain Belt Express data requests that

24   you were responsible for in your possession?

25   A   I believe I do. If you could

 1   indicate which ones?

 2   **Q   Sure. There was a DR response with**

 3   **regard to the effect the 500 megawatt converter**

 4   **station in Missouri, and I believe that you issued**

 5   **a data response to that DR that stated that Staff**

 6   **does not claim that the 500 megawatt injection from**

 7   **the Missouri converter station has any impact to**

 8   **increase or decrease the reserve margin**

 9   **requirements for the region.**

10   A   I'm sorry, could you direct me to

11   which DR you're referring to?

12   **Q   Yes. It was in 9E, which I've got a**

13   **copy here, it's actually on page A of the DRs**

14   **directed to you personally.**

15   A   This is the string regarding my

16   responses to Miss Kelly's testimony?

17   **Q   They were not, well, they maybe but**

18   **it was on page 8, they were DRs that were directed**

19   **to you. I can show you a copy if you don't have**

20   **one handy.**

21   A   Could you repeat the question? I

22   think I have the right section. I just...

23   **Q   Yeah. The question, "Was a request**

24   **to provide study results performed for or by Staff**

25   **where the 500 megawatt injection from the Missouri**

1   converter station has been considered and resulted

2   in an increase in the reserve margin requirements

3   for the region?"

4   And the Staff response, which I

5   believe you supplied, stated, "Staff has not stated

6   or alleged that the 500 megawatt injection from the

7   Missouri converter station has any impact to

8   increase or decrease the reserve margin

9   requirements for the region as described by Ms.

10   Kelly."

11   A   Yes, I believe you read that

12   correctly.

13   Q   Okay. And that's Staff's position;

14   correct?

15   A   That, I believe you read that

16   correctly.

17   Q   I know I read it correctly but my

18   question is that it's accurate that Staff has not

19   stated or made that allegation; correct?

20   A   I'm sorry, I'm not following the

21   question.

22   Q   Have you changed, or do you have any

23   basis to change the response that I just read into

24   the record?

25   A   No.

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 1          Q      Okay.  That's all I was getting at.

 2   Now, we also asked a -- in that -- in that same

 3   data request set certain questions about the

 4   interconnection process, and you were asked whether

 5   you were aware of the MISO high voltage, direct

 6   current task team that was studying interconnection

 7   procedures form merchant HVDC projects.  Do you

 8   recall those?

 9          A      Can you direct me to which number

10   that is?

11          Q      I believe it's DR 14.

12          A      I find DR 14, yes.

13          Q      Okay.  And you were asked if any

14   members of Staff have been engaged in the MISO

15   merchant HVDC task team and Staff stated that it

16   did not have any members engaged in that task team;

17   correct?  I believe it's on page 12.

18          A      Yes.  Sorry, I'm a little confused by

19   how this appears here, let me read it.  Yes, you

20   are correct.

21          Q      So Staff is aware of this process but

22   it's not itself participating in it; is that

23   correct?

24          A      Not at this time.  Correct.

25          Q      The Staff monitoring the HVDC task
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 1   team process that MISO was conducting?

 2        A      Not in the formal manner, that I'm

 3   aware of.

 4        Q      Okay.  Now, let me direct your

 5   attention to some DRs earlier in that set, looking

 6   at DR 4, which appears on page 6?

 7        A      I'm there.

 8        Q      And the question asked Staff to

 9   provide its understanding of the in-service data,

10   the most recent extra high voltage, meaning voltage

11   of 345kV or above, transmission line projects built

12   from, into, or across Missouri between a series of

13   following transmission providers and that included

14   SPP and Associated Electric, SPP and MISO, MISO and

15   Associated Electric, SPP and the Southwestern Power

16   Administration and two others, and Staff's response

17   was that this is not information that is readily

18   available to Staff; correct?

19        A      Correct.

20        Q      Does Staff have any ability to get

21   this kind of information?

22        A      To ask for a specific date?  I did

23   have discussion with other members of Staff who

24   have longer history than I do here.  In fact, we

25   had some confusion as to your question.  For
```

 1   example, the Lutzville Heritage line, you know, you

 2   have one terminal that is in one RTO and one

 3   terminal that is in another. Is that through -- it

 4   was -- it was -- as this question was worded, we

 5   did not have a ready answer.

 6   There -- there have been high voltage

 7   lines built, and compounding the confusion is that

 8   the regions identified to some extent are later

 9   invention in the transmission lines that span the

10   regions, if you will.

11   Q   Now, in the next data request, number

12   5, Staff was asked does it believe that there is a

13   need for construction of new transmission

14   interconnections or facilities between transmission

15   providers that operate in Missouri, and Staff's

16   response was that it did not have an opinion;

17   correct?

18   A   Correct.

19   Q   Let me switch gears on you just a

20   minute. Do you recall the condition that we've --

21   we discussed, I believe the chairman did with one

22   of the Grain Belt Express witnesses, about cost

23   allocation that Grain Belt Express would not cost

24   allocate the process except if it came before the

25   Commission and Staff disagrees with that?

 1   A   I would not refer to that as a

 2   condition, but I do recall that discussion being

 3   had earlier.

 4   **Q   In any event, even though Staff and**

 5   **Grain Belt Express disagree on this issue, the**

 6   **company, Grain Belt Express, has stated that it**

 7   **will not propose or attempt to cost allocate any**

 8   **portion of the process unless the Missouri**

 9   **Commission gives its authorization; correct?**

10   A   I don't agree with that. I believe

11   Grain Belt Express disagrees with itself on that

12   issue and Staff has not expressed an opinion.

13   **Q   All right. Fair enough. Finally,**

14   **with regard to Mr. Copeland's surrebuttal**

15   **testimony, he asserted that his study did take into**

16   **consideration off-system sales.**

17   **Does Staff have any basis to quarrel**

18   **with that statement?**

19   A   Staff does not quarrel with that

20   statement.

21   MR. ZOBRIST: Thank you. Nothing

22   further, Judge.

23   JUDGE BUSHMANN: Questions by

24   Commissioners?

25   CHAIRMAN HALL: Yeah just a few.

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 1                  CROSS-EXAMINATION
 2    QUESTIONS BY CHAIRMAN HALL:
 3         Q       Good afternoon.
 4         A       Good afternoon.  Evening.
 5         Q       Yes, it is evening.  So if -- if this
 6    line is approved and constructed, there will be a
 7    MISO interconnection study that will be -- there
 8    will be an interconnection study; correct?
 9         A       There will need to be an
10    interconnection study prior to there being a MISO
11    interconnection.
12         Q       Do you have any reason to believe
13    that -- well, and so that -- that study may require
14    certain upgrades; is that correct?
15         A       It could.
16         Q       Do you have any reason to believe
17    that Clean Line's estimate for what those upgrades
18    might be is unreasonable?
19         A       Can I give a preface that I think
20    would be helpful to your understanding of this
21    situation?
22         Q       Sure.
23         A       It's not only will the MISO study
24    indicate that upgrades are necessary.  It's what
25    may the MISO study indicate that the line cannot
```

 1   operate in the manner that Clean Line has proposed

 2   it be operated, and as those two relate together,

 3   you could have a greater or lesser impact.

 4   **Q   So tell me why you think it is**

 5   **possible that the interconnection study might say**

 6   **that the line cannot be operated the way that Clean**

 7   **Line intends to operate it?**

 8   A   Well, I think we have SPP and their

 9   interconnection agreement says you can operate this

10   line in the way that you want as long as it doesn't

11   really interface with any other SPP facilities, and

12   you have PJM saying you can interconnect this line

13   if you operate it on our terms.

14   The entity that hasn't spoken out

15   there and is literally stuck in the middle is MISO.

16   I don't know what that study will or won't say.

17   **Q   What is your fear? Or what is your**

18   **concern?**

19   A   I would be concerned if either the

20   limitations that MISO would place on the operation

21   of this project --

22   **Q   Such as?**

23   A   Such as what has been looked at in

24   the thermal analysis so far, to my understanding,

25   has been operation on a peak day and operation on a

1   secondary peak day. What has been looked at that

2   is in my understanding that has not yet been looked

3   at is operation of this -- of these facilities for

4   importing wind.

5   As in on a shoulder month, in the

6   evening, when the wind is blowing and Missouri

7   demand is low, what impact will that have on the

8   Missouri system? I am not aware of a study that

9   has looked at that yet.

10   **Q   And what is your fear that such a**

11   **study might show?**

12   A   That you can't do it.

13   **Q   Please explain that to me. What do**

14   **you mean, you can't do it?**

15   A   This, the details of this are better

16   handled by other Staff personal, but I'll do my

17   best.

18   If the purpose of the line is

19   literally to bring in wind energy in hours when the

20   wind is blowing, I think that we have studies

21   related to the Mark Twain line that says Missouri

22   cannot currently take that.

23   I think that with the Mark Twain

24   line, we have studies saying that we can take some

25   of that. What details concerning operation will

1   fall out of that is not something that I know and

2   I'm not aware of how you would know that without

3   doing the sort of detailed study that is required

4   under the MISO interconnection process.

5   **Q   And what is your understanding as to**

6   **the status of that interconnection study?**

7   A   Grain Belt has not yet requested it.

8   **Q   So your fear is that that study will**

9   **essentially say that you can't drop the 500 in**

10 **Missouri?**

11   A   Fear is a strong word. I would be

12 concerned if the cost benefits that are assumed at

13 this point for the Missouri converter station may

14 not play out once the project has been more

15 robustly studied.

16   **Q   Who -- is -- is Mr. Beck the witness**

17 **who would be more --**

18   A   He would be a witness that could

19 handle that.

20   **Q   You said a moment ago that you're not**

21 **sure you're the right witness for this, so I'm**

22 **wondering who, in your mind, is the right witness**

23 **for this.**

24   A   Unfortunately, this is one of those

25 areas where you're asking a very good question,

 1   which means it's very complex. There are aspects

 2   of that that would fall under Mr. Beck, Mr.

 3   Stahlman, and Mr. Lange.

 4   **Q   Do you believe that as a general rule**

 5   **when you increase access to additional energy, that**

 6   **that results in enhanced reliability?**

 7   A   I am assuming you're meaning within a

 8   given region?

 9   **Q   Yes.**

10   A   I think that any time you show

11   additional energy or additional capacity is added

12   to a region, you will have fewer contingency events

13   that will show up, unless you have one massive

14   generator.

15   **Q   So do you believe -- I mean, I know**

16   **that you and Staff take some issue with the Lowell**

17   **study in this case, but do you believe that there**

18   **-- that there is a reliability benefit from -- from**

19   **this project?**

20   A   Mr. Beck would be the better witness

21   to address that question.

22   **Q   What role should the levelized cost**

23   **of energy analysis play in our analysis as to -- as**

24   **to whether there is a need for this project?**

25   A   That is really something that I have

 1   struggled with, you know, in assessing -- it has

 2   been presented that that is a factor pointing to

 3   public interest in that utilities have -- or MJMEUC

 4   in particular is taking advantage of that, to take

 5   advantage of the project.

 6   You know, if we were to do a giant

 7   Chapter 22 study for the State of Missouri, is that

 8   what we would look at? Possibly. You know, that's

 9   not something that we have done.

10   To the extent that the Commission is

11   interested in, you know, what is a -- the levelized

12   cost of energy with or without, you know, the

13   market cost of capacity figured in, with or without

14   renewable energy credits figured in, with or

15   without the, you know, Missouri adder under the

16   RES, I don't have a good answer for you as to which

17   -- how you should weigh those factors.

18   CHAIRMAN HALL: Okay. Thank you.

19   JUDGE BUSHMANN: Recross based on

20   bench questions? Missouri Landowners?

21   MR. AGATHEN: No.

22   JUDGE BUSHMANN: Show Me Landowners?

23   MR. LINTON: No questions.

24   JUDGE BUSHMANN: Rockies Express?

25   MS. GIBONEY: No questions, Judge.

 1   JUDGE BUSHMANN: MIEC?

 2   MR. MILLS: No questions.

 3   JUDGE BUSHMANN: NRDC?

 4   MR. ROBERTSON: No questions.

 5   JUDGE BUSHMANN: Infinity Wind Power?

 6   MS. PEMBERTON: No questions.

 7   JUDGE BUSHMANN: Wind on the Wires?

 8   MR. BRADY: No questions.

 9   JUDGE BUSHMANN: MJMEUC?

10   MR. HEALY: Just a couple, Judge,

11   based on Chairman Hall's questions and Miss

12   Kliethermes's answers.

13   RECROSS-EXAMINATION

14   QUESTIONS BY MR. HEALY:

15   **Q   Just hypothetically assume the**

16   **delivery of additional 500 megawatts into MISO is**

17   **something that can be done or the upgrades achieved**

18   **to make that happen. Wouldn't you agree it's in**

19   **the public interest if 300,000 Missourians can get**

20   **$20 renewable energy?**

21   A   I think that that question assumes

22   kind of a option A versus option B. I'm not sure

23   that I can answer that without knowing what option

24   B is if --

25   **Q   Option B would be it's not done.**

1   There is no CCN and the line's not constructed. I

2   would think option A would be the delivery of this

3   energy at very low cost assuming that, as you

4   mentioned, the MISO interconnection process is

5   completed. We're talking about MJMEUC, which is a

6   non-profit, so the savings and benefits are passed

7   through directly to the municipalities.

8   And I'm just asking your opinion if

9   that would be the public benefit if those 300,000

10   Missouri citizens could receive the benefit of that

11   low cost renewable energy.

12   A   I don't see that that fits in with

13   how this Commission has in the past looked at

14   public interest and I don't have an answer beyond

15   that.

16   Q   And not to argue, but is that a legal

17   standard you're referring to? As to public

18   interest?

19   A   It is one of the tartan criteria.

20   Q   And it's your opinion, though, that

21   -- and just to make sure I understand -- that the

22   Missouri citizens and utilities not regulated by

23   this Commission are not counted as public benefit;

24   is that correct?

25   A   That is not my testimony.

 1   Q   Okay. Can you explain then what it
 2   is that you're getting at?
 3   A   Well, I don't think you can look at
 4   -- you've used the terms "public interest" and
 5   "public benefit" and -- interchangeably and to me,
 6   public benefit is one side and cost is the other.
 7   Or some other form of negative.
 8   So to determine public interest, I
 9   think you need not only is this doing a good thing
10   but is this the -- an efficient or an effective --
11   effective is probably a better word -- means of
12   achieving that end.
13   So to answer in the abstract is
14   energy good, I can't really say that that
15   contributes to a public interest determination one
16   way or the other.
17   Q   Okay. Would it be fair to say that
18   you're not able to answer the question? Or you
19   have no opinion? Or is that your -- maybe I don't
20   understand if you do have an opinion as the
21   question in the hypothetical presented.
22   A   If the hypothetical is energy at a
23   given price good, I don't have an opinion on that
24   question in the abstract.
25   MR. HEALY: Okay. No further

1   questions, Judge.

2   JUDGE BUSHMANN: Grain Belt Express?

3   MR. ZOBRIST: Just a couple.

4   RECROSS-EXAMINATION

5   QUESTIONS BY MR. ZOBRIST:

6   **Q**   **Miss Kliethermes, are you aware MISO**

7 **has done one of the shoulder period studies for**

8 **some other interconnection?**

9   A   I'm sorry, say that again?

10   **Q**   **You talked about a shoulder period**

11 **study that you thought MISO might --**

12   A   A shoulder peak.

13   **Q**   **I'm sorry, I misheard you. Are you**

14 **aware of a shoulder peak study that MISO has done**

15 **under similar circumstances in the past?**

16   A   Other than the one that Grain Belt

17 requested in this case?

18   **Q**   **I'm not sure they called it a**

19 **shoulder peak study. They had a system impact**

20 **study that they requested and that was completed.**

21   A   And I'm sorry, I believe the term

22 maybe secondary peak. I'm sorry.

23   **Q**   **Okay. In any event, if MISO conducts**

24 **a study that it is required to conduct under its**

25 **tariff and it results in a necessary upgrade, who**

1   is responsible for that upgrade?

2   A   Well, it depends, and in this case in

3   particular it depends on whether or not given

4   portions of the interconnection, or of the

5   transmission system are or are not present.

6   Q   To kinda cut to the chase, regardless

7   of what PJM and SPP and MISO do, they are the ones

8   that are responsible for making certain that the

9   interconnection at each of the converter stations

10   is safe and reliable; correct?

11   A   They are responsible for putting in

12   places operations that will cause it to be safe and

13   reliable.

14   Q   Then as the interconnector, Grain

15   Belt Express looks at those studies and if there

16   are upgrades they are required to construct,

17   they'll have to do that; right?

18   A   If they move forward, correct.

19   Q   Okay. And just one other question.

20   The Mark Twain project that you were referring to,

21   that's an alternating current project; correct?

22   A   It is.

23   Q   And this is a DC, a high voltage,

24   direct current project that has very different

25   properties; correct?

 1   A   They're both intended to move wind

 2   from a windy region to the eastern half of MISO or

 3   PJM, so I disagree.

 4   **Q   Well, there's no converter station**

 5   **involved with the Mark Twain project, is there?**

 6   A   I think you're requesting that there

 7   be one.

 8   **Q   The Mark Twain --**

 9   A   No. I understand what you're saying.

10   There -- there is not. It is part of the AC

11   transmission system.

12   MR. ZOBRIST: Thank you. Nothing

13   further, Judge.

14   JUDGE BUSHMANN: Redirect by Staff?

15   MR. WILLIAMS: Thank you.

16   REDIRECT EXAMINATION

17   QUESTIONS BY MR. WILLIAMS:

18   **Q   Chairman Hall asked you about the**

19   **interconnection study concerns that Staff has?**

20   A   Yes.

21   **Q   Has Staff taken any action in this**

22   **case with regard to conditions or otherwise to**

23   **address that concern?**

24   A   I know Staff has a condition

25   concerning the interconnection agreements. I don't

 1   have the final wording in front of me.

 2   MR. WILLIAMS: May I approach?

 3   JUDGE BUSHMANN: You may.

 4   (Wherein, Exhibit 206 was

 5   introduced.)

 6   **Q   (BY MR. WILLIAMS) What I am handing**

 7   **you is what's been marked as Exhibit 206. And if**

 8   **you take a look at the bottom of the first page?**

 9   A   Yes.

10   **Q   Is that wording between Grain Belt**

11   **and Staff that's been agreed upon the condition?**

12   A   That's my understanding.

13   **Q   And does that condition then address**

14   **Staff's concerns, or at least help alleviate them?**

15   A   This condition helps address Staff's

16   concerns, correct.

17   MR. WILLIAMS: No further questions.

18   JUDGE BUSHMANN: Thank you, Miss

19   Kliethermes, you may step down.

20   (Witness excused.)

21   JUDGE BUSHMANN: Why don't we take

22   the next Staff witness, please?

23   SHAWN LANGE,

24   having been called as a witness, was sworn

25   by the Court, upon his oath, and testified

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 1      as follows:
 2                      DIRECT EXAMINATION
 3   QUESTIONS BY MS. MYERS:
 4        Q     Mr. Lange, please state your full
 5   name for the record.
 6        A     My name is Shawn, S-h-a-w-n; Lange,
 7   L-a-n-g-e.
 8        Q     Mr. Lange, where are you employed and
 9   what is your job title?
10        A     I am a Utility Engineering Specialist
11   III with Missouri Public Service Commission.
12        Q     And did you prepare or cause to be
13   prepared portions of Staff's rebuttal report that's
14   been marked as Exhibit 201?
15        A     Yes.
16        Q     Do you have anything you wish to
17   correct in that testimony?
18        A     There is one correction.
19        Q     What page is that correction on?
20        A     Page 57.  In the third set of bullet
21   points, the third bullet point where it states "The
22   Palmyra Tap, Palmyra 345kV line," that should be
23   deleted.
24        Q     Besides that correction, do you have
25   any others?
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 1          A     No.
 2          Q     So if I asked you the same questions
 3   today, would your answers be the same?
 4          A     Yes.
 5          Q     And is the information in this
 6   document true and correct to the best of your
 7   knowledge?
 8          A     Yes.
 9                MS. MYERS:  Okay.  Judge, Staff
10   tenders Mr. Lange for cross.
11                JUDGE BUSHMANN:  First cross would be
12   Missouri Landowners?
13                MR. AGATHEN:  No questions, Your
14   Honor.
15                JUDGE BUSHMANN:  Show Me Landowners?
16                MR. LINTON:  No questions.
17                JUDGE BUSHMANN:  Rockies Express?
18                MS. GIBONEY:  No questions, Judge.
19                JUDGE BUSHMANN:  MIEC?
20                MR. MILLS:  No questions.
21                JUDGE BUSHMANN:  NRDC?
22                MR. ROBERTSON:  No questions.
23                JUDGE BUSHMANN:  Infinity Wind?
24                MS. PEMBERTON:  No questions.
25                JUDGE BUSHMANN:  Wind on the Wires?
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 1              MR. BRADY:  No questions.

 2              JUDGE BUSHMANN:  MJMEUC?

 3              MR. HEALY:  No questions of this

 4   witness, Judge.

 5              JUDGE BUSHMANN:  Grain Belt Express?

 6              MR. ZOBRIST:  Just a couple of

 7   questions, Judge.

 8                   CROSS-EXAMINATION

 9   QUESTIONS BY MR. ZOBRIST:

10        Q    Mr. Lange, is it true that Staff is

11   not aware of a transmission project that has

12   executed contracts for spare parts or other

13   restoration equipment prior to receiving a

14   certificate of convenience and necessity from this

15   Commission?

16        A    I am not aware of any.

17        Q    And is it also true that Staff is not

18   aware of a transmission project that has had such

19   contracts in place for spare parts or other

20   restoration equipment before the project's final

21   engineering and design were achieved?

22        A    I am not aware of any.

23        Q    I've got a question about short

24   circuit ratio that I think we had some discussion

25   of in the set of data requests that are directed to
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 1    you.  Do you recall those?
 2         A    Yes.
 3         Q    I am looking at data request number
 4    10.
 5         A    Okay.
 6         Q    You were essentially asked about
 7    short circuit ratio studies, and Grain Belt Express
 8    asked that if the short circuit ratio at the chosen
 9    point of connection is much higher than 2.0, if the
10    studies showed that a short circuit ratio for 500
11    -- for the 500 megawatt Missouri HVDC converter
12    station at the chosen point of interconnection was
13    2.0 or higher, that would alleviate Staff's
14    concerns; correct?
15         A    That was what was asked, yes.
16         Q    And that's Staff's position; correct?
17         A    Yes.
18         Q    And then if you go to data request
19    16, which is after the diagrams in your data
20    request response, I believe it may be the next to
21    last page or perhaps three pages from the end.
22         A    Okay.
23         Q    Grain Belt Express had indicated
24    that, and has indicated in this case that it
25    intends to register with NERC and its various
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 1    functions within the NERC reliability functional

 2    model as outlined in one of Dr. Galli's schedules,

 3    and the company asked you if you believe that a

 4    NERC reliability functional model entity would

 5    design equipment that is considered part of the

 6    bulk electricity system without consideration of

 7    the IEEE, NERC, N-E-R-C, and the IEC standards.

 8              Do you remember that?

 9         A    Yes.

10         Q    Okay.  And you indicated there that

11    you were not alleging and Staff was not alleging

12    that there were -- that there was any belief that

13    Grain Belt Express has not followed or taken into

14    consideration those three standards; is that

15    correct?

16         A    That is correct.

17         Q    Just for the record, what is the

18    IEEE?

19         A    The --

20         Q    It's in the record; correct?

21         A    Yes.

22         Q    And NERC, of course, is the North

23    American Electric Reliability Corporation?

24         A    Correct.

25         Q    And IEC stands for?  It's set forth
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 1    in the Commission's regulations with regard to safe

 2    adherence to electricity standards; correct?

 3          A     Correct.

 4          Q     Okay.  That's fine.  Finally,

 5    switching gears here, in the Staff report at pages

 6    16 and 17, I believe you were the person that spoke

 7    of the ability of Missouri utilities to purchase

 8    renewable energy credits; correct?

 9          A     No.  I don't believe so.

10               MS. MYERS:  Mr. Zobrist, if I may,

11    that's Dan Beck.

12               MR. ZOBRIST:  You're right.  I'll

13    save that for Mr. Beck.  Nothing further, Judge.

14               JUDGE BUSHMANN:  Questions from

15    Commissioners?

16               CHAIRMAN HALL:  No questions, thank

17    you.

18               JUDGE BUSHMANN:  Redirect by Staff?

19               MS. MYERS:  Just briefly, Judge.

20               REDIRECT EXAMINATION

21    QUESTIONS BY MS. MYERS:

22          Q     Mr. Lange, are you familiar with

23    Staff Exhibit 206, the conditions agreed to with

24    Staff and Grain Belt Express Clean Line?

25          A     Yes.
```

1   Q   Do you have a copy of that?

2   A   Yes. I do.

3   Q   Now, you were asked questions by Mr.

4   Zobrist regarding contracts for spare parts,

5   engineering plans, et cetera?

6   A   Yes.

7   Q   Did Staff come to an agreement with

8   Grain Belt upon providing information such as this?

9   A   We did.

10   Q   Also, Mr. Zobrist asked you questions

11 about NERC and Commission Rules for safety; is that

12 correct?

13   A   That is correct.

14   Q   Did we also come to a condition on

15 that with Staff or with Grain Belt?

16   A   Yes, we did.

17   MS. MYERS: Thank you Mr. Lange. No

18 further questions.

19   JUDGE BUSHMANN: Thank you, you may

20 step down.

21   THE WITNESS: Thank you.

22   (Witness excused.)

23   JUDGE BUSHMANN: Let's go ahead and

24 take another Staff witness.

25 ///

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 1                      MICHAEL STAHLMAN,

 2        having been called as a witness, was sworn

 3        by the Court, upon his oath, and testified

 4        as follows:

 5                      DIRECT EXAMINATION

 6   QUESTIONS BY MR. JOHNSON:

 7        Q     Could you please state your name for

 8   the record and spell it for the court reporter?

 9        A     Michael Stahlman, M-i-c-h-a-e-l

10   S-t-a-h-l-m-a-n.

11        Q     Where are you employed, in what

12   capacity?

13        A     Missouri Public Service Commission as

14   a regulatory economist.

15        Q     And did you prepare or cause to be

16   prepared narrative testimony that is a portion of

17   the Staff rebuttal report marked as Staff Exhibit

18   Number 201, both NP and HC?

19        A     Yes.

20        Q     And do you have any changes or

21   corrections to that testimony?

22        A     No.

23        Q     Are the sections of Staff's rebuttal

24   report that you authored true and correct to the

25   best of your knowledge and belief?
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 1          A     Yes.

 2          Q     And if you were to present the same

 3   testimony today, would your testimony be the same?

 4          A     Yes.

 5                MR. JOHNSON:  I tender the witness

 6   for cross.

 7                JUDGE BUSHMANN:  First cross by

 8   Missouri Landowners?

 9                MR. AGATHEN:  No questions, Your

10   Honor.

11                JUDGE BUSHMANN:  Show Me Landowners?

12                MR. LINTON:  No questions.

13                JUDGE BUSHMANN:  Rockies Express?

14                MS. GIBONEY:  No questions.

15                JUDGE BUSHMANN:  MIEC?

16                MR. MILLS:  No questions.

17                JUDGE BUSHMANN:  NRDC?

18                MR. ROBERTSON:  No questions.

19                JUDGE BUSHMANN:  Infinity Wind Power?

20                MS. PEMBERTON:  No questions.

21                JUDGE BUSHMANN:  Wind on the Wires?

22                MR. BRADY:  No questions.

23                JUDGE BUSHMANN:  MJMEUC?

24                MR. HEALY:  Just a few, Your Honor.

25   ///
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 1                   CROSS-EXAMINATION
 2   QUESTIONS BY MR. HEALY:
 3        Q      Mr. Stahlman, how are you this
 4   afternoon?
 5        A      Good, thank you.
 6        Q      I'd like to direct you to the Staff
 7   report, page 41, and towards the bottom of that
 8   page in bold print it says Economic Benefits.
 9        A      Yes.
10        Q      Is that the section of the Staff
11   report that you authored?
12        A      Yes.
13        Q      Okay.  Did you read the MJMEUC
14   rebuttal testimony in this case?
15        A      Yes.
16        Q      Did you read the MJMEUC surrebuttal
17   testimony in this case?
18        A      Yes.
19        Q      And did you review the MJMEUC Grain
20   Belt TSA agreement?
21        A      Partially, as I am not a full lawyer,
22   it's hard for me to fully understand all the terms
23   that are used.
24        Q      I understand.  Did you send any data
25   requests to MJMEUC asking for any further
```

 1   **explanation of the claim benefits MJMEUC had in**

 2   **their testimony?**

 3   A   No, I reviewed the data requests sent

 4   by other parties.

 5   **Q   I notice you didn't include the**

 6   **benefits that MJMEUC expects to receive. Is there**

 7   **a particular reason why?**

 8   A   Generally, this was in response to

 9   the study that was provided, well, wasn't provided

10   until rebuttal, I believe, by the DED but Grain

11   Belt cited it in its application.

12   **Q   And it would be fair to say that you**

13   **produced no opinion or produced no testimony**

14   **examining the potential benefit of this contract to**

15   **Missouri municipalities and their rate payers; is**

16   **that correct?**

17   A   I think Staff witness Sarah

18   Kliethermes addressed the contract in further

19   details.

20   MR. HEALY: No further questions.

21   JUDGE BUSHMANN: Grain Belt Express?

22   CROSS-EXAMINATION

23   QUESTIONS BY MR. ZOBRIST:

24   **Q   Mr. Stahlman, you don't dispute the**

25   **findings set forth in the study by the Department**

```
 1    of Economic Development, do you?

 2         A      I urged caution in their use.

 3         Q      You didn't run a similar study

 4    yourself, did you?

 5         A      I did not run a similar study.

 6         Q      Okay.  If you could go to page 37 of

 7    the Staff report?  The upper portion of that page

 8    that you authored?

 9         A      Yes.

10         Q      You state there that "Staff

11    recognizes that obtaining finances," I think that's

12    the word, but I think you may have meant financing,

13    "may provide supporting evidence of economic

14    feasibility."

15                Do you see that, sir?

16         A      Yes, sir.

17         Q      Now, and financing includes raising

18    financial support from both equity investors and

19    through the issuance of debt; correct?

20         A      Yes.

21         Q      Now, you don't disagree with Staff

22    witness David Murray's conclusions in this case, do

23    you?

24         A      No.

25         Q      And Mr. Murray found that Grain Belt
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 1    is financially capable to be granted a CCN;

 2    correct?

 3         A     I believe that's his testimony, yes.

 4         Q     And Grain Belt Express has agreed to

 5    Staff's condition that it will not begin

 6    construction of the project until it provides

 7    evidence that it has secured financing commitments

 8    that ensure there will be sufficient capital to

 9    complete the project; correct?

10         A     Correct.

11         Q     And you don't have any basis to doubt

12    that highly confidential figure that's on page 20

13    of the report indicating the level of financial

14    investment by three major investors in Clean Line

15    Energy Partners, the ultimate parent of Grain Belt

16    Express?

17         A     I do not doubt Mr. Murray's numbers.

18         Q     Now, on page 37 you have a reference

19    to a website called Statistic Brain.  Do you see

20    that, sir?

21         A     Yes.

22         Q     And you were asked in a data request

23    to identify the companies that were included in

24    that Statistic Brain survey, and you stated that

25    Staff did not seek further documentation about
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 1   which companies were included in those -- in the

 2   category that you looked at which was

 3   transportation, communications, and utilities;

 4   correct?

 5        A     Correct, as I also note in my

 6   testimony that I believe the category was broad.

 7        Q     And I think you also told us that, to

 8   your knowledge, Staff had never relied on Statistic

 9   Brain in another Public Service Commission

10   proceeding; correct?

11        A     Correct.

12        Q     How did you find that?  Did you just

13   do a Google search or what?

14        A     I started trying to find the concept

15   of what is the likelihood of companies that obtain

16   financing would be like, or have -- have failed,

17   and this kinda goes to the concept.  It was, as I

18   admit, it was an overly broad category.  It was

19   just -- but the point is that not all companies

20   receive financial support to begin their company

21   continue on to -- toward success.

22        Q     Well, in the course of that broad

23   research of this Statistic Brain website, you

24   weren't able to determine whether any of the

25   companies in there were electric transmission
```

 1 **companies; correct?**

 2   A   I did not seek further, I didn't

 3 think that it deterred from the point and

 4 immediately Grain Belt Express is a unique company,

 5 so I think it would be hard to find a category

 6 specific to a Grain Belt Express like project.

 7   **Q   You didn't even find if there were**

 8 **any other transmission companies, if they were**

 9 **investor owned utilities or merchant products or**

10 **other companies that engage in electric**

11 **transmission?**

12   A   I could not find any readily

13 available data on those.

14   **Q   Shifting to a new topic, you agree**

15 **that the concept of a purchase power agreement**

16 **between a wind generator and a load-serving entity**

17 **like MJMEUC is a typical business model that's**

18 **followed in the industry; correct?**

19   A   That was in a data request you sent?

20   **Q   Right, yeah, was in data request 6 C,**

21 **if you have that in front of you?**

22   A   Yeah, just a second.

23   **Q   And these may have been general data**

24 **requests.**

25   A   I'm thinking it's in the first set to

1   me. I can't remember. Okay. Yes. So the --

2   "Does Staff consider a purchase power agreement

3   between a wind generator and a load-serving entity

4   to be a typical business model?" Answer, "Yes."

5   **Q   And would you also agree that a**

6   **Transmission Service Agreement between a**

7   **load-serving entity like MJMEUC and an electric**

8   **transmission company like Grain Belt Express is a**

9   **standard and accepted business model?**

10   A   Yes.

11   **Q   And those kinds of agreements can**

12   **show the economic feasibility of a project like the**

13   **Grain Belt Express?**

14   A   Not in and of themselves. But they

15   could. Assist towards a finding of such.

16   **Q   Have you examined the Infinity**

17   **contract that MJMEUC has entered into with regard**

18   **to the Iron Star project?**

19   A   No.

20   **Q   And you haven't done any analysis of**

21   **how that contract fits in with the MJMEUC Grain**

22   **Belt Express Transmission Service Agreement, have**

23   **you?**

24   A   Sarah Kliethermes addressed with

25   specific to the TSA between MJMEUC and Grain Belt

1   that there is a question on whether that would

2   provide sufficient revenue for that station to be

3   economically feasible.

4   **Q   Well, my question was have you done**

5   **any analysis of the relationship of the Infinity**

6   **Wind MJMEUC contract with the MJMEUC Grain Belt**

7   **TSA?**

8   A   No.

9   MR. ZOBRIST: Okay. Nothing further,

10   Judge.

11   JUDGE BUSHMANN: Questions by

12   Commissioners?

13   CHAIRMAN HALL: Yeah, I think I have

14   a couple.

15   CROSS-EXAMINATION

16   QUESTIONS BY CHAIRMAN HALL:

17   **Q   Good evening.**

18   A   Good evening.

19   **Q   You are the author of the portion of**

20   **the report on page 22; is that correct?**

21   A   Let me get to it to make sure. I

22   believe that's correct. Yes.

23   **Q   So about a third of the way down the**

24   **page where it says, "Because these studies,"**

25   **referring to RTO interconnection studies, "are**

 1   **incomplete, any potential necessary transmission**

 2   **upgrades are unknown and Staff is unable to**

 3   **determine the economic feasibility of the project."**

 4   **Is that correct?**

 5   A   Correct.

 6   **Q   So are you -- are you familiar with**

 7   **Exhibit 206, which is a set of conditions agreed to**

 8   **between Staff and Clean Line?**

 9   A   Generally, yes. I don't have the

10   specific knowledge in front of me.

11   MR. JOHNSON: I have a copy.

12   **Q   (BY CHAIRMAN HALL) So the condition**

13   **at the bottom of page 1 concerning interconnection**

14   **studies and safety where there is an agreement**

15   **between Grain Belt and Staff, does that agreement**

16   **satisfy Staff's concerns related to economic**

17   **feasibility?**

18   A   I think that helps mitigate much of

19   Staff's concerns. There is still, even though I

20   can -- there -- there's kind of a question on

21   whether we were going to discuss the economic

22   feasibility of the project versus the station and

23   it would be, the station in particular, and so

24   while, as we've heard other testimony in this case,

25   that there's a pretty reasonable evidence that

1   there -- that the plan is good to go straight from

2   SPP areas to PJM, the -- a lot of the questions

3   really come down to how does that -- how would

4   adding a MISO converter station impact that

5   analysis.

6   **Q   So Staff's feasibility concerns,**

7   **based upon the lack of interconnection agreements,**

8   **exists, though, it's mitigated, this condition?**

9   A   Yes.

10   **Q   In your discussion with Mr. Zobrist,**

11   **you discussed, I think it was his term, a**

12   **participant funded model?**

13   A   I'm familiar with it.

14   **Q   Okay. Maybe I'm remembering a**

15   **different discussion. Does that -- what I don't**

16   **understand is when you have that type of model, and**

17   **you have a company that essentially all the parties**

18   **agree is financially able to finance the project,**

19   **why that type of agreement doesn't totally take the**

20   **concern of feasibility off the table?**

21   A   I still -- part of this would have to

22   deal again if we're looking at the entire project

23   or the Missouri converter station in particular, it

24   is quite possible that even with the entire line

25   being economically feasible and it's going to be

 1   participant funded, it's -- it -- there are

 2   scenarios where if the converter station, which is

 3   -- had been kind of acknowledged to be less

 4   economic than the entire line, if that station is

 5   not as viable as the entire line itself, is that

 6   likely to lead to that plant being abandoned in the

 7   future should a situation arise? Or if -- or if

 8   Grain Belt is struggling, you tend to cut the least

 9   economic portion of a project in whole.

10   So it's really a question on -- I

11   guess there's a question on do we want to examine

12   the benefits of the line as a whole or how focused

13   are we on, with regard to the Missouri converter

14   station.

15   **Q   So implicit in that analysis is that**

16   **the public benefit is focused solely on those rate**

17   **payers that could benefit from those 500 megawatts?**

18   A   A lot of my analysis tended to look

19   more specific at the impacts on the Missouri

20   portion rather than the entire project.

21   **Q   So the answer was yes?**

22   A   Yes.

23   CHAIRMAN HALL: Okay. Thank you.

24   JUDGE BUSHMANN: Commissioner Rupp?

25   COMMISSIONER RUPP: No. I'm okay.

 1   JUDGE BUSHMANN: Recross based on

 2   bench questions?

 3   Missouri Landowners?

 4   MR. AGATHEN: No questions, Your

 5   Honor.

 6   JUDGE BUSHMANN: Show Me Landowners?

 7   MR. LINTON: No questions, Your

 8   Honor.

 9   JUDGE BUSHMANN: Rockies Express?

10   MS. GIBONEY: No questions, Judge.

11   JUDGE BUSHMANN: MIEC?

12   MR. MILLS: No questions.

13   JUDGE BUSHMANN: NRDC?

14   MR. ROBERTSON: No questions.

15   JUDGE BUSHMANN: Infinity Wind?

16   MS. PEMBERTON: No questions.

17   JUDGE BUSHMANN: Wind on the Wires?

18   MR. BRADY: No questions.

19   JUDGE BUSHMANN: MJMEUC?

20   MR. HEALY: No questions, Judge.

21   JUDGE BUSHMANN: Grain Belt?

22   MR. ZOBRIST: Nothing further, Judge.

23   JUDGE BUSHMANN: Redirect by Staff?

24   MR. JOHNSON: Thank you Judge, just

25   briefly.

```
 1                  REDIRECT EXAMINATION

 2   QUESTIONS BY MR. JOHNSON:

 3          Q     Mr. Stahlman, Mr. Zobrist brought up

 4   a statement you made on page 37 of the Staff

 5   rebuttal report regarding financing and use of a

 6   website.

 7                Were you questioning the company's

 8   financial ability to construct the line in this

 9   instance?

10          A     No.

11          Q     What was the purpose of your

12   statement?

13          A     The purpose was to state that

14   obtaining the financing to initiate the project

15   does not necessarily mean that the project is

16   likely to continue towards success in the future.

17   I know one example that was brought up, although it

18   was bad by fraud, was Mamtek.

19                That that did have initial financing

20   and I'm not saying that Mamtek is anything

21   reminiscent of what the Grain Belt is proposing.

22   It's just that the concept that projects do fail on

23   occasion.

24          Q     And also just to clarify, if you

25   could take a look at Staff Exhibit 206, I believe
```

 1 **Chairman Hall asked you about the condition at the**

 2 **bottom of the first page.**

 3   **Would that condition also require**

 4 **Grain Belt to provide a plan to address any new**

 5 **issues that should arise out of those studies?**

 6   A   Yes.

 7   MR. JOHNSON: That's all. Thank you,

 8 Judge.

 9   JUDGE BUSHMANN: Thank you, Mr.

10 Stahlman. You may step down.

11   (Witness excused.)

12   JUDGE BUSHMANN: Let's do one more

13 tonight. Call the next witness.

14   MR. WILLIAMS: Judge, for the record,

15 I believe that the data request that Mr. Zobrist

16 referred to whenever he was asking questions of

17 Sarah Kliethermes is attached to Mr. Galli's, I

18 don't know if it's direct or surrebuttal, but some

19 of his testimony is Schedule AWG-13.

20   JUDGE BUSHMANN: Thank you for

21 clarifying.

22   DANIEL BECK,

23   having been called as a witness, was sworn

24   by the Court, upon his oath, and testified

25   as follows:

```
 1                    DIRECT EXAMINATION

 2   QUESTIONS BY MR. WILLIAMS:

 3        Q      Would you please state and spell your

 4   name.

 5        A      Daniel I. Beck, B-e-c-k.

 6        Q      Mr. Beck, did you contribute to

 7   Staff's rebuttal report that has been marked as

 8   Exhibit 201?

 9        A      I did.

10        Q      And are your contributions to that

11   report at pages 8 to 9, 10 to 18, 42 to 45, and 67

12   to 69?  And if you need me to repeat that, I

13   certainly can.

14        A      And I agree with those cites.

15        Q      And do -- does your experience and

16   credentials appear on the Appendix at pages 1 to 3?

17        A      They do.

18        Q      And for that to be your testimony

19   here today, would you have any changes to make to

20   it?

21        A      Not at this time.

22        Q      Then page -- those pages I

23   identified, that are your testimony before the

24   Commission here today?

25        A      Yes.
```

 1   MR. WILLIAMS: With that, I'll tender

 2   Mr. Beck for examination.

 3   JUDGE BUSHMANN: Cross by Missouri

 4   Landowners?

 5   MR. AGATHEN: No questions, Your

 6   Honor.

 7   JUDGE BUSHMANN: Show Me Landowners?

 8   MR. LINTON: No questions.

 9   JUDGE BUSHMANN: Rockies Express?

10   MS. GIBONEY: No questions, Judge.

11   JUDGE BUSHMANN: MIEC?

12   MR. MILLS: No questions.

13   JUDGE BUSHMANN: NRDC? He's gone.

14   Infinity Wind?

15   MS. PEMBERTON: No questions.

16   JUDGE BUSHMANN: Wind on the Wires?

17   MR. BRADY: No questions.

18   JUDGE BUSHMANN: MJMEUC?

19   MR. HEALY: Just a few questions.

20   CROSS-EXAMINATION

21   QUESTIONS BY MR. HEALY:

22   Q   **Mr. Beck, how are you doing this**

23   **evening?**

24   A   Doing good. I Googled it, and

25   evening does not actually start until 6:00.

 1   Q   We're nine minutes away.

 2   A   I hope that isn't a -- a

 3   foreshadowing.

 4   Q   I plan on being done with you before

 5   evening starts, how about that?

 6   A   Okay.

 7   Q   I can have you turn to page 16 of the

 8   Staff report and look at the last three lines.

 9   Also what I'm looking at is on 17, your discussion

10   of RECs within the State of Missouri, and I have

11   just a couple of follow-up questions.

12   Did you consider the needs and

13   requirements of Missouri municipalities on meeting

14   their own renewable energy credit goals or

15   renewables?

16   A   No, there were actually drafts of the

17   initiative petition that created the renewable

18   energy standard that would have included the munis,

19   but those didn't get passed. So I did not consider

20   that as part of this discussion.

21   Q   And are you aware of the renewable

22   requirements that the City of Columbia have in

23   place through ordinance?

24   A   Generally aware. I don't know all

25   the specifics, but...

 1   Q   And are you generally aware of the

 2   desire of the MoPEP group the last few years and

 3   the addition of solar and wind they have made in a

 4   move toward a different diversified portfolio?

 5   A   And, yeah, for example, specific

 6   projects that have been carried out on both solar

 7   and wind come to mind.

 8   Q   Okay. Did you read the MJMEUC

 9   rebuttal testimony in this case?

10   A   Seems like a long time ago, but yes.

11   Q   Did you read the MJMEUC surrebuttal

12   testimony?

13   A   I don't know that I read it all.

14   Q   Do you recall the MJMEUC rebuttal

15   testimony discussing the need and the desire for

16   members for additional renewable energy?

17   A   I do.

18   Q   Did you send any data requests or

19   have caused to be sent any data requests to MJMEUC

20   for further elicitation in understanding that

21   topic?

22   A   No.

23   MR. HEALY: That's all the questions

24   I have, thank you.

25   JUDGE BUSHMANN: Grain Belt Express?

```
 1                 CROSS-EXAMINATION

 2   QUESTIONS BY MR. ZOBRIST:

 3        Q     Mr. Beck, just a couple of follow-up

 4   questions on renewable energy credits.

 5              If a utility purchases RECs to

 6   fulfill its renewable energy standard requirements

 7   but does not purchase any renewable energy, is it

 8   true that that would not be able to lead to any

 9   lower wholesale energy prices if the renewable

10   energy is low cost?

11        A     I think your question is premised

12   that it would be lower cost than the existing, than

13   their existing portfolio, and I guess under that

14   scenario then it would -- they would not get the

15   economic benefit of that.

16        Q     Okay.  And if a utility purchases

17   RECs, is it also true that it would do nothing to

18   improve that utility's fuel diversity?

19        A     It wouldn't change their fuel

20   diversity at all.

21        Q     And generally Staff favors utilities

22   having a diverse fuel and resource mix; is that

23   fair to say?

24        A     In general, yes.

25        Q     Let me just ask you a couple of
```

1   **questions about the decommissioning fund proposal**

2   **that Grain Belt Express has made in this case.**

3   A   Okay.

4   **Q   Is it true as a, not just a general**

5   **proposition but an absent proposition, that up**

6   **until this case at least, the Commission has never**

7   **required any kind of a decommissioning fund with**

8   **regard to granting a CCN and an electric**

9   **transmission line?**

10   A   Not that I'm aware of.

11   **Q   And is it true that no transmission**

12   **line that you're aware of has been decommissioned**

13   **in the first 20 years of its operation?**

14   A   Again, I'm not aware of any.

15   **Q   Is it fair to say that the only**

16   **decommissioning funds that you're personally**

17   **familiar with are the decommissioning funds at**

18   **nuclear plants like Callaway or Wolf Creek?**

19   A   As far as electric facilities go,

20   that would be a true statement.

21   MR. ZOBRIST: Nothing further, Your

22   Honor.

23   JUDGE BUSHMANN: Questions by

24   Commissioners?

25   ///

 1   CROSS-EXAMINATION

 2   QUESTIONS BY CHAIRMAN HALL:

 3   **Q   Good afternoon. So if the line is**

 4   **built, including the converter station, so there is**

 5   **under my hypothetical 500 megawatts available at**

 6   **the converter station, does that in and of itself**

 7   **improve reliability for, I want to say for the**

 8   **Missouri portion of the MISO region?**

 9   A   I'm struggling with the idea of

10   reliability. If you -- if you look at Missouri as

11   just a total region and inserting more electricity

12   into that, would that -- and provide another

13   source, would that provide more reliability, yes.

14   If, on the other hand, the

15   reliability you're talking about is the effect that

16   that has on specific power lines in a given area

17   and the -- that -- that's the -- that's the part

18   that -- that I -- that the scenario wouldn't give

19   you enough information to know the answer to.

20   **Q   Well, what type of reliability is**

21   **being analyzed related to a -- to a loss of load**

22   **expectation?**

23   A   So the loss of load expectation study

24   basically is attempting to model -- it's really

25   more of a generation analysis. It is simply saying

  1   if you put this new generator in this area, it has

  2   this effect.

  3   Now, so you say why -- why was that

  4   even entered in the record here? The reason is is

  5   because this particular transmission line is tied

  6   to generation and in fact sort of looks like

  7   generation if you try to model it, and so that's

  8   what they did in that analysis.

  9   And it's, you know -- in my

 10   experience it's fairly unique to see loss of load

 11   study applied to a transmission line, but it's

 12   quite common to see that applied to a -- to a

 13   generation plant.

 14   **Q   So -- so I understand that the -- the**

 15   **analysis is not typical when we're looking at a**

 16   **transmission line, but -- and I understand why**

 17   **we're looking at it here.**

 18   **What my question, though, was the --**

 19   **the result of a load -- of a loss of load**

 20   **expectation analysis leads to some number that is**

 21   **compared with a base case to make a reliability**

 22   **analysis, is it not? Or to look at a reliability**

 23   **benefit from additional generation?**

 24   A   It's the reliability of additional

 25   generation where normally, when I think of

 1   reliability, I either think of it as the

 2   reliability for customers, and that's, you know,

 3   whether my lights are on or not, or it's the

 4   reliability of something like a transmission

 5   grid --

 6   Q   Okay, well, then, let's look at it

 7   from each.

 8   A   Okay.

 9   Q   From the perspective of a customer in

10   the Missouri portion of the MISO footprint, would

11   the addition of 500 megawatts at the converter

12   station result in increased reliability?

13   A   I think you would see no change in

14   the SAIDI, SAIFI, CAIDI, CAIFI --

15   Q   I have no idea what any of those are.

16   A   Okay.

17   Q   But that's okay.

18   A   Basically we have a rule that

19   requires that the utilities report various

20   reliability statistics and those statistics measure

21   how often they have outages, how long those outages

22   are, whether that's for a system or whether that's

23   for a customer, and it's those measures, and the

24   simple reality is if you -- you know, they've been

25   filing those since 2009, I believe, and there's

1   never been the situation where we have had a

2   generator down and people -- or so many generators

3   were down that you literally didn't keep the lights

4   on.

5   So the statistics would be the exact

6   same and, you know, the average customer is going

7   to see the same reliability before and after unless

8   we really do get to this catastrophic event.

9   **Q   Okay, let me -- so I guess not from**

10   **the perspective of would a particular rate payer's**

11   **lights go off, but the likelihood.**

12   A   Okay.

13   **Q   Is there -- is there -- is it**

14   **reasonable to assume that, with additional**

15   **generation, or additional energy available, that it**

16   **is less likely that a Missourian in the MISO**

17   **footprint's lights would go off?**

18   A   I guess if it is -- when we're

19   talking about, you know, a process where you get

20   one day in ten years as your base, as your standard

21   that you want to meet, and then you lower that

22   number a little bit -- it -- it does have an effect

23   there. It's just --

24   **Q   And that's all I'm asking.**

25   A   Okay.

```
 1        Q       Would it lower that number a little

 2   bit?

 3        A       It lowers that little portion of risk

 4   that people experience for -- that's out there for

 5   keeping your lights on.

 6        Q       And, of course, whether the cost

 7   would justify that is a whole other question?

 8        A       Yeah.

 9        Q       Okay.  Were you in the hearing room

10   when Miss Kliethermes and I were discussing the

11   levelized cost of energy and the role that that

12   could play in our analysis here?

13        A       I was actually sitting at my desk.

14        Q       Googling evening?

15        A       Doing the amazing things we can do.

16   I needed to actually charge my cell phone, for the

17   record.

18        Q       Then you won't benefit from her

19   insightful answer.

20        A       But I was able to listen to some --

21   to most of it.

22        Q       I'll ask you the same question.  What

23   role should that analysis play in -- in -- in the

24   Commission's view of whether or not this particular

25   project is needed?
```

 1   A   So maybe I can relate my experience

 2   with levelized costs, and that is they're, you

 3   know, we specify levelized cost analysis in the

 4   Integrated Resource Planning process and it's a

 5   valuable tool.

 6   Typically, when a utility makes a

 7   resource decision, though, you'd expect a more

 8   robust analysis. That would be more -- would be

 9   typically used to levelize cost analysis for a

10   screening tool.

11   So, you know, I think it has value

12   but I think it's not the end-all, be-all. And this

13   is where I think, you know, as a Staff member with

14   29 years of experience, this particular project

15   tests our ability to analyze something that we

16   haven't seen before. And so, you know, at this

17   point in this project, I don't know that we really

18   do have specific information about each generator.

19   I don't think anybody -- there's not -- you know,

20   that information is being, to the extent that it's

21   available, is being shared, but it's just not

22   there.

23   And so, you know, the levelized cost

24   analysis may be the most detailed analysis

25   available at this time, given the data we have.

1   Q   So if that were to show that the

2 energy flowing from the Clean Line transmission

3 line dropped into Missouri had the lowest levelized

4 cost of energy available, would that in and of

5 itself -- what -- what would that tell you?

6   A   I think it -- I think it would tell

7 you that, you know, that, for what was looked at,

8 that's what the numbers showed. I think the harder

9 part is, is that, that, you know, to do a more

10 robust, integrated resource type model of hourly

11 loads and -- and hourly production and how that all

12 affects, that's the -- that's the hard part that --

13 and -- and it's particularly difficult, by the way,

14 it's almost unfair for -- for a company like GBE

15 because they can't get Ameren Missouri's detailed

16 data about their plants. They can get publicly

17 available information but there's only so much

18 information they're going to have.

19   So, I mean, it's, you know, it's --

20 it's not an easy analysis, and it's, you know,

21 ultimately your analysis is as good as the data you

22 have. So, I mean, to be fair, the type of detailed

23 information I'm talking about is very hard when

24 you're not the incumbent utility.

25   Q   So if -- if instead of transporting

1   wind, Clean Line was transporting energy from a gas

2   plant in Kansas.

3   A   Okay.

4   Q   So obviously higher capacity factor,

5   but other than that, are there significant

6   differences that would cause Staff either

7   additional concerns or would that mitigate the

8   Staff's concerns? Or is the source of generation

9   really not the source of the concern?

10   A   I think that the way I guess maybe I

11 would characterize it then would be the natural gas

12 plant would be dispatchable where in our experience

13 at least wind has not been up until this point and

14 -- and this is where the operation, though, of an

15 AC line, or a DC line, excuse me, may well be that

16 it is dispatchable. That that decision is made by

17 the RTOs, that they control it that way. We just

18 -- that, in essence, decision hasn't been made yet

19 as to how that converter station will function, but

20 it could be. It would be treated as dispatchable

21 and that would certainly change how things are

22 done.

23   Q   Okay. Last line of questioning.

24 Miss Kliethermes also suggested that it was

25 possible that MISO could study the project and the

 1   **converter station and conclude that the line could**

 2   **not function or the converter station could not**

 3   **function as Clean Line is proposing.**

 4   **Can you explain to me how, from your**

 5   **perspective, how that might be possible, or is it**

 6   **simply a function of what you said just a moment**

 7   **ago? That -- that MISO might say that the wind is**

 8   **not dispatchable?**

 9   A   You know, I think that -- I think

10   that's part of it. If -- if, and I don't want to

11   -- I'm just going off my recollection, but I also

12   remember that the discussion also discussed the

13   idea of Mark Twain line being done or not done.

14   And right now the particular location that's being

15   picked to put the energy into Missouri is -- is a

16   constrained area.

17   So putting more energy into that area

18   at the wrong time is going to be more of a problem.

19   So but -- and so I think there's -- so I think you

20   end up with two scenarios. The other scenario then

21   is the Mark Twain project going through. I think

22   that helps move power. It's not specifically, this

23   -- this doesn't directly tie into Mark Twain but

24   it's just a few miles, I mean, maybe ten, fifteen

25   miles from the Mark Twain line, but it ties into a

 1   345, specifically the -- the 345.

 2   So, you know, I think that -- that

 3   the -- that -- that -- that the, you know,

 4   reliability under the Mark Twain line existing gets

 5   much better than you do the study to get the real

 6   results and make those determinations.

 7   I guess there's one last little thing

 8   and that is when the testimony that you all heard

 9   for the Mark Twain line talked about Missouri wind

10   and, you know, at some point, as a previous witness

11   described, when new lines get built, you're

12   competing for those. And -- and I'd like to give

13   you an example. I appreciate your indulgence in

14   letting me talk here, but the Transource line that

15   the Commission approved and then you recently had a

16   couple of switch station requests.

17   What -- what basically took place

18   there was that line went in, Missouri went from

19   467, I think point 5 megawatts of wind to, after

20   these two requests that we just approved, that was

21   another 500 megawatts of wind. So that, by putting

22   that -- I mean, what -- what happened was that

23   transmission line got approved, and now we have two

24   wind units that are hooked to that that more than

25   doubled Missouri's wind capacity. One, the Osborn

 1   wind farm is completed and then the second wind

 2   farm will -- I think in June of this year is

 3   expected to come online.

 4   So by putting in that new line,

 5   Missouri's wind prospects, or realities changed

 6   dramatically overnight. And, you know, I am

 7   hopeful that similar things could happen for the

 8   Mark Twain line. But this will compete with that.

 9   CHAIRMAN HALL: Okay. Thank you.

10   JUDGE BUSHMANN: Recross based on

11   bench questions? Missouri Landowners?

12   MR. AGATHEN: No, Your Honor.

13   JUDGE BUSHMANN: Show Me Landowners?

14   MR. LINTON: No questions.

15   JUDGE BUSHMANN: Rockies Express?

16   MS. GIBONEY: No questions, Judge.

17   JUDGE BUSHMANN: MIEC?

18   MR. MILLS: No questions.

19   JUDGE BUSHMANN: NRDC?

20   MR. ROBERTSON: No questions.

21   JUDGE BUSHMANN: Infinity Wind?

22   MS. PEMBERTON: No questions.

23   JUDGE BUSHMANN: Wind on the Wires?

24   MR. BRADY: No questions.

25   JUDGE BUSHMANN: MJMEUC?

 1   MR. HEALY: Just a few follow-up on

 2   bench questions, Your Honor.

 3   RECROSS-EXAMINATION

 4   QUESTIONS BY MR. HEALY:

 5   **Q   You mentioned a Transource line. Are**

 6   **you generally familiar with the contract rates that**

 7   **are being moved across that capacity?**

 8   A   I am not.

 9   **Q   Okay. Are you generally familiar**

10   **with the capacity factor of the wind farms that are**

11   **using that path?**

12   A   I am not.

13   **Q   Okay. Would you agree with the**

14   **general proposition that competition usually drives**

15   **prices down in RTO markets? Let me rephrase that.**

16   **Does extra energy usually result in**

17   **lower energy prices?**

18   A   The general economic concept I agree

19   with. The fact that you brought in RTOs and there

20   are such things as the congestion makes it hard for

21   me to give a definitive answer on that.

22   **Q   Let me take a step back. Let's take**

23   **out negative proxy. Where you have to actually pay**

24   **obviously to know. Let's just look at your general**

25   **LMP at a delivery point and LSE.**

 1   **There's usually extra energy**

 2   **available at that LMP. Does the delivery point**

 3   **increase or decrease price usually?**

 4   A   If you're going to stick with that

 5   LMP, that works fine. The problem I have is that

 6   when you have a negative pricing LMP, it's very

 7   likely that there is going to be some other area

 8   that's constrained and -- and the LMPs are the

 9   total opposite direction.

10   Q   **Isn't it true that MISO has the**

11   **ability to turn back their wind generators and**

12   **reduce those opportunities and those occurrences?**

13   A   I don't know that I -- since you're

14   referring to all MISO wind generators, I don't know

15   the answer to that.

16   Q   **Okay. Did you participate in MISO**

17   **HVDC task force?**

18   A   No.

19   Q   **Did you have a chance to review**

20   **Schedule JG-8 in the surrebuttal testimony of John**

21   **Grotzinger?**

22   A   I am proud to say I do not recall

23   what JG-8 is.

24   Q   **Well, that's fine. I'll tell you,**

25   **it's HC, but without getting into the numbers which**

1   make it HC, it's a projection of LMP points inside

2   Missouri in 2021 and this follows up on what you

3   mentioned about the Mark Twain line.

4   It's projecting that if the Mark

5   Twain line is put into service as MISO predicts in

6   their TEP, that that coupled with Grain Belt will

7   reduce LMPs to several delivery points inside

8   Missouri, versus if Grain Belt is not built, the

9   LMPs being even higher even with the Mark Twain

10   project in place.

11   Would you agree with that general

12   proposition that's likely to be true?

13   A   I am surprised by the second part of

14   that, but I -- I did not look at the analysis to

15   have any reasonable comment. I'm sorry.

16   Q   That's fine. Were you present

17   earlier today when Mr. Grotzinger was testifying?

18   A   At least for part of his testimony.

19   Q   And did you have an opportunity to

20   hear the redirect on Schedule JG-3 which compared

21   the price of SPP and a MISO transmission versus the

22   Grain Belt Express Pricing?

23   MR. WILLIAMS: I'm going to object to

24   that, I think he's getting beyond the scope of

25   Commissioner questions.

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 1                    JUDGE BUSHMANN:  What's your

 2    response?

 3                    MR. HEALY:  I think Chairman Hall

 4    talked about initially reliability, but he did ask

 5    about levelized cost questions and how that would

 6    impact particularly MISO.

 7                    I think this goes back into that

 8    showing that Grain Belt Express does actually help

 9    reduce overall energy costs.

10                    JUDGE BUSHMANN:  Overruled.  You may

11    answer.

12                    MR. HEALY:  I'll just rephrase or

13    reask the question.

14        Q     (BY MR. HEALY)  Mr. Grotzinger had

15    made some discussions in redirect regarding his

16    Schedule JG-3, which was the comparison between SPP

17    and MISO rates versus the Grain Belt Express tariff

18    rates.

19                    Were you present or watching for that

20    part of the direct?

21        A     I don't recall that discussion.

22                    MR. HEALY:  That's fine, Judge.  I

23    have no further questions.

24                    MR. ZOBRIST:  I just have a couple of

25    follow-up.
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 1                     RECROSS-EXAMINATION
 2   QUESTIONS BY MR. ZOBRIST:
 3          Q     Mr. Beck, to the Chairman's question
 4   about the Missouri converter station, if MISO
 5   studies that and finds there is an impact and
 6   mitigation is required, Grain Belt Express, if it
 7   wants to interconnect, would have to mitigate that
 8   impact; correct?
 9          A     That's my understanding of MISO's
10   open access tariffs.
11          Q     And if the impact is mitigated by
12   Grain Belt Express, is it true that reliability
13   would be enhanced with the injection of power by
14   the project?
15          A     It would certainly be enhanced after
16   the improvements were made.  Whether that
17   enhancement -- I think the kind of overall intent
18   is that, sort of a do no harm idea.  That you
19   improve the system to the point where the current
20   reliability is maintained.
21          Q     And isn't it true that MISO has to
22   allow Grain Belt Express to interconnect if it's
23   willing to fund those upgrades that lead to the
24   mitigation?  That's NERC policy, isn't it?
25          A     That's, I think, again, the idea of
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 1   open access.

 2        Q      Now, you were talking a little bit in

 3   the context of the LCOE, that it's a valuable tool

 4   but then you related it to a resource decision.

 5   Now, this is not a resource case.  This is a

 6   certificate of convenience and necessity case;

 7   correct?

 8        A      This is a certificate of convenience

 9   and necessity.  I guess certificates of convenience

10   and necessity can involve transmission lines or

11   generation resources, so.

12        Q      And isn't it true a decision has been

13   made by a party to this case, by MJMEUC, that they

14   want to take advantage of this potential resource?

15        A      That's my understanding.

16        Q      New topic.  Are you aware that MISO

17   has established a mechanism known as DIRs,

18   Dispatchable Intermittent Resources?

19        A      I am not an expert on that.

20        Q      Are you just aware that MISO has this

21   tool that it uses to manage intermittent resources

22   that's called Dispatchable Intermittent Resource

23   tool?

24        A      To be honest, the last time I

25   remember hearing about that was when it was kind of
```

 1   a discussion, and I -- so I didn't follow the --

 2   Q   Fair enough. Fair enough. Final

 3   question. You talked about the Transource line and

 4   the two wind farms that interconnected there that

 5   the Commission approved within the last six months.

 6   Do you remember that?

 7   A   And just to be clear, the Commission

 8   actually approved the switch stations that connect,

 9   and it's a very subtle distinction.

10   Q   Thank you for reminding me.

11   A   I suspect you knew that.

12   Q   I did know that. I forgot, and Mr.

13   Harden probably would have thrown something at me

14   if you hadn't corrected me. But wasn't that the

15   point Mr. Berry was making yesterday, saying that

16   when you had these new transmission lines, the new

17   transmission fills up with interconnections?

18   A   And that's why I made a slight

19   reference in that I wasn't sure, to be honest, I

20   didn't remember which witness it was, but I think

21   that was his testimony was, is, is sort of the if

22   you build it, they will come scenario.

23   And I think if I -- my understanding

24   of Grain Belt's theory is that the same would work.

25   It's just the trick is that the generation would be

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 1   out in Kansas and -- by building this line.  That

 2   is the proposal here.

 3         Q      Right, but one of the resource points

 4   would be the 500 megawatt converter station in

 5   Missouri?

 6         A      That's correct.

 7                MR. ZOBRIST:  Nothing further, Judge.

 8                JUDGE BUSHMANN:  Redirect?

 9                MR. WILLIAMS:  No, thank you.

10                JUDGE BUSHMANN:  Thank you, Mr. Beck.

11   I think that's enough for today.  We're off the

12   record.

13                (Witness excused.)

14                (Adjourned for the day at 6:21 p.m.)

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1                   CERTIFICATE OF REPORTER

2

3           I, TARA SCHWAKE, a Registered

4   Professional Reporter and Notary Public within and

5   for the State of Missouri, do hereby certify that

6   the Public Service Hearing aforementioned was held

7   at the time and in the place previously described,

8   and have hereunto set my signature this 26th day of

9   March, 2017.

10

11   _____

12                Tara Schwake

13                RPR, CRR, CSR

14

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