

BEFORE THE PUBLIC SERVICE COMMISSION  
STATE OF MISSOURI

TRANSCRIPT OF PROCEEDINGS

Evidentiary Hearing

January 26, 2016

Jefferson City, Missouri

Volume 7

In The Matter of The Application of	)
Ameren Transmission Company of Illinois	)
For Other Relief Or, In The Alternative	)
A Certificate Of Public Convenience And	)
Necessity Authorizing It To Construct,	)
Install, Own, Operate, Maintain And	)
Otherwise Control And Manage A	)
345,000-Volt Electric Transmission Line	)
From Palmyra, Missouri To The Iowa	)
Border And An Associated Substation	)
Near Kirksville, Missouri	)

File Number  
EA-2015-0146

RONALD D. PRIDGIN, Presiding  
SENIOR REGULATORY LAW JUDGE  
DANIEL Y. HALL, Chairman  
STEPHEN M. STOLL  
WILLIAM P. KENNEY,  
MAIDA J. COLEMAN,  
COMMISSIONERS

REPORTED BY:  
Tracy Taylor, CCR Number 939  
TIGER COURT REPORTING, LLC

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A P P E A R A N C E S

JAMES B. LOWERY, Attorney at Law  
MIKE TRIPP, Attorney at Law  
SMITH LEWIS  
P. O. Box 918  
Columbia, Missouri 65205  
573.443.3141  
Lowery@smithlewis.com  
FOR: Ameren Transmission Company of Illinois

JEFFREY K. ROSENCRANTS, Attorney at Law  
ERIC DEARMONT, Attorney at Law  
ED FITZHENRY, Attorney at Law  
1901 Chouteau Avenue  
P. O. Box 66149  
St. Louis, Missouri 63166  
314.554.3955  
Jrosencrants@ameren.com  
FOR: Ameren Transmission Company of Illinois

DAVID LINTON, Attorney at Law  
314 Romaine Spring View  
Fenton, Missouri 63026  
314.341.5769  
jdlinton@reagan.com  
FOR: United for Missouri

JENNIFER HERNANDEZ, Attorney at Law  
ARTURO HERNANDEZ, Attorney at Law  
Hernandez Law Firm  
1802 Sun Valley Drive  
Jefferson City, Missouri 65109  
573.616.1486  
jennifer@hernandezlegal.com  
FOR: Neighbors United

JEFFREY SMALL, Attorney at Law  
720 City Center Drive  
Carmel, Indiana 46032  
319.249.5248  
jsmall@mienergy.org  
FOR: Midcontinent Independent System Operator, Inc.

1 JOSHUA HARDEN, Attorney at Law  
4520 Main Street  
2 Kansas City, Missouri 64111  
573.639.7615  
3 joshua.harden@dentons.com

4 NATHAN WILLIAMS, Deputy Staff Counsel  
5 JAMIE MYERS, Assistant Staff Counsel  
6 JACOB WESTEN, Senior Staff Counsel  
7 MARK JOHNSON, Assistant Staff Counsel  
8 HAMPTON WILLIAMS, Legal Counsel  
9 Public Service Commission  
200 Madison Street  
P. O. Box 360  
Jefferson City, Missouri 65102  
573.751.6514  
10 FOR: The Staff of the Missouri Public Service  
Commission

11 TIM OPITZ, Senior Counsel  
12 DUSTIN ALLISON, Acting Public Counsel  
Office of Public Counsel  
13 200 Madison Street  
P. O. Box 2230  
14 Jefferson City, Missouri 65102  
573.751.5558  
15 FOR: Office of Public Counsel and the Public

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1 JUDGE PRIDGIN: All right. Good morning.  
2 We are on the record. Let me verify from counsel. I  
3 got a couple of e-mails from counsel on their  
4 understanding of the order of witnesses today. And I  
5 want to check with counsel that I saw what I thought  
6 was maybe not a disagreement but a misunderstanding,  
7 and if I could get, I guess, some clarification from  
8 counsel. The first witness would be Ms. Turpin; is  
9 that correct?

10 MR. LOWERY: Your Honor, yes. I checked  
11 with the Neighbors' counsel and I checked with  
12 Mr. Williams. I think I did, in part, misinterpret  
13 Mr. Williams' chart, but I think we're in agreement on  
14 the order that I had switched them around this  
15 morning.

16 JUDGE PRIDGIN: So that would be  
17 Ms. Turpin, Mr. DeJoya. If I'm not pronouncing --

18 MR. LOWERY: Right.

19 JUDGE PRIDGIN: -- that right, I  
20 apologize. Dr. Bailey, Mr. Powers, and then back to  
21 Mr. Vosberg, Mr. Wood.

22 MR. LOWERY: Correct. And then back to  
23 Mr. Endorf for the rest of our witnesses.

24 JUDGE PRIDGIN: All right. Very good.  
25 Anything further from counsel before Ms. Turpin takes

1 the stand?

2 All right. Ms. Turpin, if you'll come  
3 forward to be sworn, please. If you'll raise your  
4 right hand to be sworn.

5 (Witness sworn.)

6 JUDGE PRIDGIN: Thank you very much.  
7 Please have a seat. And Mr. Lowery, when you're  
8 ready.

9 MR. ROSENCRANTS: Jeff Rosencrants for  
10 Ameren Transmissi on Illinois.

11 VICKIE TURPIN, testified as follows:

12 DIRECT EXAMINATION BY MR. ROSENCRANTS:

13 Q. Could you state your full name for the  
14 record?

15 A. Vickie Turpin.

16 Q. Are you the same Vickie Turpin who filed  
17 Surrebuttal in Case EA-2015-0146 consisting of  
18 11 pages and two schedules and marked as Exhibit 9?

19 A. I am.

20 Q. Who are you testifying for today?

21 A. Ameren Transmissi on Company of Illinois.

22 Q. Do you have any corrections to the -- to  
23 the Surrebuttal Testimony that you filed in this  
24 matter?

25 A. I do. I inadvertently addressed Boyd

1 Harris as Mr. Boyd and it should be Mr. Harris.

2 **Q. Other than that, are the answers**  
3 **contained in your Surrebuttal Testimony still true and**  
4 **correct?**

5 A. They are.

6 **Q. If you were asked these questions today,**  
7 **would your answers be the same?**

8 A. Yes.

9 MR. ROSENCRANTS: Your Honor, at this  
10 time ATXI would move for admission of the Surrebuttal  
11 Testimony of Vickie Turpin, including schedules  
12 attached thereto as Exhibit 9, and would tender her  
13 for cross-examination.

14 JUDGE PRIDGIN: Thank you,  
15 Mr. Rosencrants. Any objections?

16 Hearing none, Exhibit 9 is admitted.

17 (ATXI Exhibit 9 marked for  
18 identification.)

19 JUDGE PRIDGIN: Cross-examination,  
20 Mr. Williams.

21 MR. WILLIAMS: No questions.

22 JUDGE PRIDGIN: Mr. Small.

23 MR. SMALL: No questions, Your Honor.

24 JUDGE PRIDGIN: Thank you. I don't see  
25 IBEW or United for Missouri. Public Counsel.

1 MR. OPITZ: No questions, Judge.

2 JUDGE PRIDGIN: Neighbors United.

3 MS. HERNANDEZ: Good morning. Thank you.

4 CROSS-EXAMINATION BY MS. HERNANDEZ:

5 Q. Hello, Ms. Turpin. Your testimony  
6 indicates that you have completed work for Ameren  
7 Services prior to this case; is that correct?

8 A. Yes.

9 Q. And as I understand it, Ameren Services  
10 is a parent company or operating company of Ameren  
11 Transmission Company of Illinois. Correct?

12 A. Yes.

13 Q. And your previous work with Ameren  
14 Services was to prepare an appraisal on a 775-acre,  
15 primarily agricultural, parcel involving a permanent  
16 easement request by Ameren Missouri of 2.89 acres; is  
17 that correct?

18 A. Yes. I believe so.

19 Q. And can I refer to that, to shorten the  
20 name, to Pike Road 252. Would you understand what I  
21 mean by that?

22 A. Yes.

23 Q. Okay. Would you agree that the basic  
24 tenants of appraisals are, you inspect the property --  
25 or one of the basic tenants of an appraisal would be

1 **you inspect the property?**

2 A. Correct.

3 **Q. And you research similar properties in**  
4 **the area as part of the appraisal; is that correct?**

5 A. Yes.

6 **Q. And you compare recent sales of**  
7 **properties in the area to determine a fair market**  
8 **value; is that correct?**

9 A. Yes.

10 **Q. And then the appraiser will give a final**  
11 **appraisal report with all the data and research to**  
12 **issue a final opinion of value; is that correct?**

13 A. Yes.

14 MS. HERNANDEZ: Okay. May I approach?

15 JUDGE PRIDGIN: You may.

16 MS. HERNANDEZ: I have to grab some more  
17 copies for you.

18 MR. WILLIAMS: Do you know what exhibit  
19 number this is?

20 MS. HERNANDEZ: Could you remind me where  
21 you stopped at?

22 JUDGE PRIDGIN: This should be Number 56.

23 (NU Exhibit 56 was marked for

24 identification.)

25 BY MS. HERNANDEZ:



1           **Q.     Okay. I'd like you to look at what has**  
2 **been premarked as Exhibit 56 by the court reporter.**  
3 **Do you recognize this document?**

4           A.     Yes.

5           **Q.     And is this a copy of an appraisal you**  
6 **completed for Ameren Services on the Pike Road 252**  
7 **appraisal?**

8           A.     It appears to be.

9           **Q.     And as part of this appraisal, this**  
10 **document states you reviewed nine comparable land**  
11 **sales; is that correct?**

12          A.     Yes.

13          **Q.     And the nine comparable land sales were**  
14 **agricultural land; is that correct?**

15          A.     Yes, I believe so.

16          **Q.     And the transmission easement requested**  
17 **by Ameren Missouri in the Pike Road 252 appraisal was**  
18 **for 2.89 acres. Correct?**

19          A.     Yes.

20          **Q.     And the easement that was sought in the**  
21 **Pike Road 252 appraisal ran along the property**  
22 **boundary and followed the county road; is that**  
23 **correct?**

24          A.     Yes.

25          **Q.     Now, do you have your Surrebuttal in**

1 **front of you?**

2 A. Yes.

3 **Q. If you could turn to page 5, lines 4**  
4 **through 6.**

5 MR. ROSENCRANTS: What page again,  
6 Counsel ?

7 MS. HERNANDEZ: Page 5, lines 4  
8 through 6.

9 THE WITNESS: Okay.

10 BY MS. HERNANDEZ:

11 **Q. In your -- at page 5, lines 4 through 6**  
12 **of your Surrebuttal, you provide an example of a**  
13 **transmission line on property and discuss what**  
14 **significance the presence of a transmission line has**  
15 **upon land values and use of the property. Correct?**

16 A. I'm not sure where -- I'm not sure what  
17 you're meaning. I'm reading lines 4 through 6, and  
18 it's talking about the subdivision I live in. Is that  
19 where you're at?

20 **Q. Yes.**

21 A. I can read you directly what I say on  
22 those lines.

23 **Q. Sure. Go ahead. Thank you.**

24 A. Four through six?

25 **Q. Yes, ma'am.**

1           A.     Well, it started, Can you provide an  
2 example? Yes, I will provide two. The first example  
3 involves a subdivision where I live. That subdivision  
4 has approximately 80 homes that sit on three-acre  
5 lots. There is a transmission line running through  
6 the development. The line was established before the  
7 subdivision was platted.

8                     That's 4 through 6.

9           MS. HERNANDEZ: May I approach?

10          JUDGE PRIDGIN: Yes, you may.

11                     (NU Exhibit 57 was marked for  
12 identification.)

13 BY MS. HERNANDEZ:

14           **Q.     I'll have you look at what has been**  
15 **premarked Exhibit 57 by the court reporter. Do you**  
16 **recognize this document?**

17           A.     The -- the one you just handed out to me?

18           **Q.     Yes, ma'am.**

19           A.     Yes.

20           **Q.     In the attachment to this Data Request,**  
21 **it shows your property in relation to a transmission**  
22 **line in your subdivision. Correct?**

23           A.     Yes.

24           **Q.     And you indicate your property is a half**  
25 **mile from the transmission line; is that correct?**

1 A. Yes.

2 Q. And the transmission line does not go  
3 across your lot. Correct?

4 A. Correct.

5 Q. And you cannot see the transmission line  
6 from your home. Correct?

7 A. Correct.

8 Q. And you live in a residential --  
9 residentially zoned subdivision; is that correct?

10 A. Well, there's -- there's no zoning in  
11 the -- in the county where I'm at, but this is -- this  
12 is restricted -- a subdivision that's restricted for  
13 single-family residential use.

14 Q. Okay. Thank you. So the primary purpose  
15 of these lots is not agriculture; is that correct?

16 A. Correct.

17 Q. On page 5, line 16 through 23 of your  
18 Surrebuttal through page 6, lines 1 through 3, if I  
19 could have you turn there?

20 A. Okay. Page 5, lines 16 through 23?

21 Q. Yes.

22 A. And page 6 -- what was the lines?

23 Q. Goes through lines 1 through 3 of page 6.

24 A. Okay.

25 Q. Are you there?

1 A. Yes.

2 Q. Okay. Here you discuss a second example  
3 of a transmission line on property and discuss what  
4 significance the presence of the transmission line has  
5 upon land values and use of the property; is that  
6 correct?

7 A. Yes.

8 MS. HERNANDEZ: May I approach?

9 JUDGE PRIDGIN: You may.

10 (NU Exhibit 58 was marked for  
11 identification.)

12 BY MS. HERNANDEZ:

13 Q. Have you had an opportunity to look at  
14 the exhibit that's been marked Number 58?

15 A. I'm looking at it right now.

16 Q. Okay. Would you agree that this is the  
17 case that you discuss as your second example in your  
18 Surrebuttal Testimony?

19 A. It appears to be, yes.

20 Q. Okay. And in this second example of your  
21 Surrebuttal Testimony, would you agree that, in that  
22 case, the right-of-way easement ran across the  
23 northern portion of the subject property and along  
24 Pike County Road 48; is that correct?

25 A. Yes.

1 Q. And would you agree that the majority of,  
2 if not all of, the properties that the Mark Twain  
3 transmission project is proposed to cross are farming  
4 or ranching properties?

5 A. Yes.

6 Q. And would you agree that the routing of  
7 the Mark Twain transmission project crosses diagonally  
8 over many properties? Would you agree with that?

9 A. I believe it did cross some diagonally,  
10 yes.

11 Q. Would you agree that a majority of them  
12 are crossed diagonally?

13 A. I don't think I can answer that.

14 Q. Okay. You -- so you don't know?

15 A. No. It's been a long time since I worked  
16 on this project, so I don't think I can answer that.

17 Q. If I could have you turn to page 6, lines  
18 16 through 17 of your Surrebuttal.

19 A. Okay.

20 Q. You discuss an article Utility Versus  
21 Proximity that study the impact of electric  
22 transmission line easement on properties. Correct?

23 A. Yes.

24 Q. And that article is attached to your  
25 testimony, Schedule VT-SR-2; is that correct?

1 A. Yes.

2 Q. **Could you, please, turn to that?**

3 A. I don't have that.

4 Q. **You don't have a copy of your testimony?**

5 A. I only have a Surrebuttal. That's it.

6 Q. **Not the attachments to it?**

7 A. No.

8 Q. **I can show you mine. It's a little**  
9 **marked up, but --**

10 COMMISSIONER KENNEY: Ms. Turpin.

11 THE WITNESS: Thank you.

12 MS. HERNANDEZ: Are you sure? I can give  
13 her mine if you'd like to look at it.

14 COMMISSIONER KENNEY: Go off yours.

15 MS. HERNANDEZ: I was going to show you  
16 mine marked up if you wanted to see it before I handed  
17 it --

18 MR. ROSENCRANTS: You probably wouldn't  
19 want to.

20 MS. HERNANDEZ: Thank you, Commissioner.

21 BY MS. HERNANDEZ:

22 Q. **Have you had an opportunity to review**  
23 **that attachment to your testimony?**

24 A. I have.

25 Q. **Would you agree that the article Utility**

1 **Versus Proximity studied the impact of transmission**  
2 **line easements on residential property?**

3 A. Yes.

4 Q. **And the residential properties that were**  
5 **evaluated were in western Wisconsin; is that correct?**

6 A. Yes.

7 Q. **And you agree that the article also did a**  
8 **literature review and included studies from**  
9 **Connecticut and Massachusetts; is that correct?**

10 A. I'm not sure where -- where that segment  
11 is.

12 Q. **If you'd turn to page -- what's page 35**  
13 **of that -- that document. Center of the page there's**  
14 **a section called Literature Review?**

15 A. Yes. Uh-huh.

16 Q. **But it would be in the third column all**  
17 **the way to the right. If you could just look through**  
18 **that.**

19 A. Yes. Connecticut and Massachusetts, yes.

20 Q. **So you would -- you would agree that the**  
21 **article did a literature review of studies from**  
22 **Connecticut and Massachusetts?**

23 A. I do.

24 Q. **Okay. And that study did not evaluate**  
25 **property in northeast Missouri. Correct?**



1 A. Correct.

2 Q. And you don't know whether the easement  
3 study in this article followed property boundaries or  
4 crossed the property in some other manner, such as  
5 diagonally. Correct?

6 A. Correct.

7 Q. Okay. On that same page of that schedule  
8 we were just looking at -- I'm sorry. If you could  
9 turn to the next page, page 36.

10 A. Okay.

11 Q. And the left-hand side of the page all  
12 the way down to the bottom -- bottom left under  
13 Constructing the Evaluation Matrix --

14 A. Yes.

15 Q. -- would you agree that starting that two  
16 sentences above the bullet point list on the bottom  
17 left of the page read, The various studies have,  
18 however, identified factors believed to influence the  
19 degree to which any one property might be affected?

20 A. I'm not seeing where you're at. I'm  
21 sorry. Oh --

22 Q. Right above that bullet point list.

23 A. Okay. So you started with, The various  
24 studies?

25 Q. Yes. If I -- I'll read that sentence

1 again if you could just confirm.

2 A. Okay.

3 Q. Okay. The various studies have, however,  
4 identified factors believed to influence the degree to  
5 which any one property might be affected. And these  
6 factors are --

7 A. Yes.

8 Q. Okay. And would you agree that the  
9 second bullet point listed there reads, Placement of  
10 the easement strip on the parcel?

11 A. Yes.

12 Q. If you could turn to page 8 of your  
13 Surrebuttal Testimony.

14 A. Okay.

15 Q. Would you agree that your testimony  
16 states, In preparation for my testimony, I actually  
17 toured several miles of an Ameren transmission --  
18 Ameren Missouri transmission line in St. Charles  
19 County which used a monopole design; is that correct?

20 A. Yes.

21 Q. And would you agree that this tour was  
22 led by Ameren Services' employees?

23 A. Yes.

24 Q. And a Mr. Doug Brown was also on the  
25 tour. Correct?

1 A. Yes.

2 Q. And that Mr. Doug Brown was the same  
3 Mr. Brown that testified in this case. Correct?

4 A. Yes.

5 Q. Now, at page 8, lines 15 through 18 of  
6 your testimony, that reads, That tour confirmed my  
7 understanding that a monopole transmission line is --  
8 make sure I have the reading right. Page 8, lines 15  
9 through 18.

10 That tour confirmed my understanding that  
11 a monopole transmission line in proximity to farms in  
12 rural and urban residences does not create a  
13 significant impact upon activities or the enjoyment of  
14 such farms in rural and urban residences.

15 Did I read that correctly?

16 A. Yes.

17 Q. But you did not speak to any property  
18 owners while on this tour. Correct?

19 A. Correct.

20 Q. Okay. On page 10 of your Surrebuttal,  
21 you -- I'll characterize it as you dispute  
22 Mr. Harris's idea of fear in the marketplace as an  
23 impact of having a transmission line easement on a  
24 parcel of property. Is that -- do you think that's a  
25 fair characterization?

1           A.     Yes.

2           **Q.     Let's see. I'm going to have an exhibit**  
3 **marked Number 59. But this one -- let me just double**  
4 **check. This one is marked highly confidential by the**  
5 **company, so I would have to go into in-camera, please.**

6           JUDGE PRIDGIN: All right. If we could  
7 get the room cleared, please. And we'll go in-camera.

8           (REPORTER'S NOTE: At this point, an  
9 in-camera session was held, Volume 8, pages 291 to  
10 297.)

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1 BY COMMISSIONER KENNEY:

2 Q. I just briefly -- on page 25 you provided  
3 two examples of where -- on the appraisal process of  
4 power lines going through the first appraisal -- or  
5 the first one was a subdivision you live in and the  
6 next one was some farm land?

7 A. Yes.

8 Q. Are there any places that ATXI is going  
9 to traverse that are unlike your first example?

10 A. I don't believe so.

11 Q. No. Well, then I guess you don't have to  
12 answer my questions. Thank you.

13 A. Uh-huh.

14 JUDGE PRIDGIN: All right. Thank you.  
15 Any re-cross based on Bench questions? Staff?

16 MR. WILLIAMS: No.

17 JUDGE PRIDGIN: MISO.

18 MR. SMALL: No, Your Honor.

19 JUDGE PRIDGIN: All right. Thank you.

20 Public Counsel.

21 MR. OPITZ: No, your Honor.

22 JUDGE PRIDGIN: Neighbors United?

23 MS. HERNANDEZ: No, thank you.

24 JUDGE PRIDGIN: Redirect?

25 MR. ROSENCRANTS: Yes, your Honor. I

1 apologize, but my redirect is going to go into the  
2 highly confidential example. I apologize for that. I  
3 didn't think it was going to be this quick.

4 JUDGE PRIDGIN: I understand. Sorry.  
5 All you people that just came back in, could I ask you  
6 to leave again, please? We have to go back into  
7 highly confidential.

8 MS. HERNANDEZ: We're going to talk about  
9 HC information again. Sorry.

10 (REPORTER'S NOTE: At this point, an  
11 in-camera session was held, Volume 8, pages 300 to  
12 304.)

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1 JUDGE PRIDGIN: Then Mr. DeJoi a can take  
2 the stand.

3 All right. Mr. DeJoi a, will you raise  
4 your right hand and be sworn, please.

5 (Witness sworn.)

6 JUDGE PRIDGIN: Thank you, sir.  
7 Mr. Tripp, when you're ready, sir.

8 DIRECT EXAMINATION BY MR. TRIPP:

9 Q. All right. Mr. DeJoi a, would you,  
10 please, state your full name?

11 A. Aaron DeJoi a.

12 Q. Do you want to spell the last name?

13 A. D-e, capital J-o-i -a.

14 Q. Mr. DeJoi a, by whom are you employed?

15 A. Dura Root Envi ronmental , LLC.

16 Q. And you're testi fying here today on  
17 behal f of Ameren Transmission Company of Illinois?

18 A. Correct.

19 Q. And are you the same Aaron DeJoi a who has  
20 caused to be prepared Surrebuttal Testimony in this  
21 case?

22 A. Yes, I am.

23 Q. And is that Surrebuttal Testimony marked  
24 as Exhibit 10 -- I guess yours isn't.

25 A. Mi ne' s not, but --

1           **Q.     We'll -- it's been premarked as Exhibit**  
2 **10:**

3           A.     Okay.

4           **Q.     With regard to the Surrebuttal Testimony**  
5 **of Aaron DeJoia, if I asked you the same questions**  
6 **today that were asked in that Surrebuttal Testimony,**  
7 **would your answers under oath be the same as they are**  
8 **in your pre-filed testimony?**

9           A.     They would.

10          **Q.     And did you have any changes to your**  
11 **Surrebuttal Testimony?**

12          A.     No changes.

13          **Q.     And is that Surrebuttal Testimony given**  
14 **to the best of your knowledge and belief?**

15          A.     Yes, it is.

16                 MR. TRIPP: Your Honor, at this time I  
17 offer into evidence Exhibit 10 into the record and  
18 tender upon receipt the witness for cross-examination.

19                 JUDGE PRIDGIN: Thank you. Exhibit 10  
20 has been offered. Any objections?

21                 Hearing none, Exhibit 10 is admitted.

22                 Cross-examination from Staff.

23                 MR. WILLIAMS: No questions.

24                 JUDGE PRIDGIN: MISO.

25                 MR. SMALL: No questions.



1 JUDGE PRIDGIN: Public Counsel

2 MR. OPITZ: No questions, Judge.

3 JUDGE PRIDGIN: Neighbors United.

4 CROSS-EXAMINATION BY MS. HERNANDEZ:

5 Q. Morning.

6 A. Good morning.

7 Q. You would agree that you have never  
8 farmed land in Marion County, Missouri. Correct?

9 A. Correct.

10 Q. And you would agree that you've never  
11 conducted ranching practices in Marion County,  
12 Missouri. Correct?

13 A. Correct.

14 Q. And you would agree that you have never  
15 farmed land in Knox County, Missouri. Correct?

16 A. Correct.

17 Q. You would agree that you have never  
18 conducted ranching practices in Knox County, Missouri.  
19 Correct?

20 A. Correct.

21 Q. And you would agree that you have never  
22 farmed land in Shelby County, Missouri. Correct?

23 A. Correct.

24 Q. And you would agree that you've never  
25 conducted ranching practices in Shelby County,

1 **Missouri?**

2 A. Correct.

3 Q. You would agree that you've never farmed  
4 land in Schuyler County, Missouri. Correct?

5 A. Correct.

6 Q. And you would agree that you've never  
7 conducted ranching practices in Schuyler County,  
8 Missouri. Correct?

9 A. Correct.

10 Q. You would agree that you've never farmed  
11 land in Adair County. Correct?

12 A. Correct.

13 Q. And you would agree that you've never  
14 conducted any ranching practices in Adair County.  
15 Correct?

16 A. Correct.

17 Q. And you would agree that you've never  
18 farmed any of the land that ATXI proposes to build  
19 this transmission line on. Correct?

20 A. Correct.

21 Q. And you would agree that you've never  
22 conducted any ranching practices on the land that ATXI  
23 proposes to build this transition line on in this  
24 case; is that correct?

25 A. Correct.

1           Q.     You would agree you've never farmed land  
2 that has a transmission line on it; is that correct?

3           A.     That is correct.

4           Q.     And you've never conducted ranching  
5 practices on land that has a transmission line on it.  
6 Correct?

7           A.     Correct.

8           Q.     You would agree that you have no  
9 experience flying any type of plane; is that correct?

10          A.     Correct.

11          Q.     And you would agree that you have never  
12 conducted an aerial agricultural application; is that  
13 correct?

14          A.     Correct.

15          Q.     Would you agree that the placement of  
16 monopoles on a farming property prohibits the use of  
17 center pivot irrigation as a possibility for  
18 irrigation by the farmer in the future?

19          A.     I would not agree with that.

20          Q.     If you have a parcel and ATXI builds and  
21 puts poles in certain places on the property, say  
22 diagonal across is how the transmission line is going  
23 to cross their -- their parcel of property, you  
24 would -- your statement is that would not prohibit the  
25 use of a center pivot -- building center pivot after

1 **the transmission line has been put through?**

2 A. Yes. I would say that it -- you could  
3 still put a center pivot in that area, depending on  
4 where everything is put.

5 **Q. Depending on where the poles are?**

6 A. Correct. And how you design the center  
7 pivot.

8 **Q. Would you agree that center pivot**  
9 **irrigation is considered to be a highly efficient**  
10 **system which helps conserve water?**

11 A. Yes.

12 **Q. Would you agree that all other conditions**  
13 **equal, the heavier the object that traverses farm**  
14 **land, the more compaction that object causes to the**  
15 **soil?**

16 A. That is incorrect.

17 **Q. So your -- let's see. Let -- let me ask**  
18 **you a follow-up question.**

19 **The construction equipment that ATXI will**  
20 **use to build this transmission line, would you agree**  
21 **that that's heavier than a John Deere tractor crossing**  
22 **the land?**

23 A. I could not say that for certain, but  
24 typical construction equipment is heavier than a John  
25 Deere tractor.

1           **Q.     Okay.  And you do not believe that that**  
2 **construction equipment would cause greater compaction**  
3 **of the ground than that John Deere tractor?**

4           A.     Not necessarily.

5           **Q.     Would you agree that equipment that is**  
6 **used to insert a 90- to 130-foot tall monopole weighs**  
7 **more than a tractor moving a grain cart across a**  
8 **field?**

9                     MR. TRIPP:  Objection, lack of  
10 foundation.

11                    JUDGE PRIDDIN:  Could you ask that again,  
12 please, Ms. Hernandez?

13 BY MS. HERNANDEZ:

14           **Q.     Would you agree that the equipment that**  
15 **is used to insert a 90- to 130-foot tall monopole**  
16 **weighs more than a tractor moving a grain cart across**  
17 **the field?**

18                    JUDGE PRIDDIN:  And I'll overrule.  He  
19 can answer if he knows, and if he doesn't know, he can  
20 say so.

21                    THE WITNESS:  I would assume it is, but I  
22 can't say for certain.

23 BY MS. HERNANDEZ:

24           **Q.     Okay.  And would you agree that as**  
25 **compaction increases, crop yield decreases?**

1 A. That has been shown in many research  
2 articles. So yes, I would agree with that.

3 Q. Okay. Your testimony states that the  
4 construction of the project will have some impact to  
5 the land; is that correct?

6 A. Yes. All activities on land have some  
7 impact from agriculture to building houses to farming.  
8 They all have impacts.

9 Q. Would you agree with me that, if land  
10 could be returned to its full productive use when  
11 compared to pre-construction, that there is some  
12 period of time that it takes to return that land to  
13 productivity?

14 A. Yes. And in my experience, that's three  
15 to five years.

16 Q. And for that period of time, there is  
17 lost income on that parcel when compared to  
18 pre-construction; is that correct?

19 A. Possible.

20 Q. Would you agree that there's a  
21 correlation between crop productivity and income?

22 A. Not always.

23 Q. Is your response based on, like, the  
24 market price of the crop?

25 A. Market price and input -- I was thinking

1 net income, so inputs would also have a cost effect on  
2 that.

3 **Q. Okay. So with your two -- the market**  
4 **price and the input, those remaining equal, lower crop**  
5 **productivity equals lower income for that parcel for a**  
6 **given year?**

7 A. You also got to consider the amount of  
8 water that got. You also got to consider what crop's  
9 being grown. So soybeans are different than corn;  
10 strawberries are different than corn; hay is different  
11 than corn. So every crop has an income potential to  
12 it. But if it's the same crop, same input, same --  
13 you know, everything's exactly the same, lower  
14 productivity, cash price is the same for your crop,  
15 inputs costs the same, diesel fuel is the same.  
16 There's so many things.

17 It's such a hypothetical. But,  
18 generally, higher productivity of a corn will be  
19 higher net income, gross income to the landowner or  
20 cash renter.

21 **Q. Thank you. Do you know whether ATXI will**  
22 **pay for different irrigation system if the system on**  
23 **the parcel now were to become incompatible with the**  
24 **placement of the transmission line on the parcel?**

25 A. I believe that another expert for ATXI is

1 better to answer that question than I am.

2 **Q. But your testimony discusses how**  
3 **landowners could seek reimbursement of those costs.**  
4 **Correct?**

5 A. Yes. And I'm not an employee of ATXI,  
6 and you would probably need to talk to someone within  
7 ATXI regarding that question.

8 **Q. But you discuss reimbursement in your**  
9 **testimony; is that correct?**

10 A. Can you point it to me in my testimony,  
11 just so I can see it?

12 **Q. Okay. That's fine. I want to ask you a**  
13 **question about aerial application or, I guess, when**  
14 **aerial application could not be performed. Assuming**  
15 **that you could still grow crop in the right-of-way,**  
16 **would you agree that there would be some crop damage**  
17 **outside the right-of-way when attempting to enter the**  
18 **right-of-way for application?**

19 A. Can you rephrase that question? I don't  
20 understand-- stand it.

21 **Q. Okay. Assuming you have a parcel, the**  
22 **transmission land crosses the parcel and you've always**  
23 **used aerial application or whatever application you're**  
24 **applying to the land. If you now can no longer fly**  
25 **above that transmission line to do your aerial**



1 application, you have to use a ground application,  
2 would you agree that there's some damage to the crop  
3 when you're entering that right-of-way to go down the  
4 right-of-way to do whatever land application that you  
5 now have to use?

6 A. No, I wouldn't agree with that.

7 Q. Draw an example, maybe. I'm sorry.

8 MS. HERNANDEZ: May I approach the --

9 JUDGE PRIDGIN: Yes, you may.

10 MS. HERNANDEZ: Can I tear this off?

11 BY MS. HERNANDEZ:

12 Q. So for sake of discussion, I'll just say  
13 we have a square parcel and your transmission line is  
14 going across diagonally.

15 A. Okay.

16 Q. Okay. And then as ATXI has proposed in  
17 this case -- I hope I can draw somewhat of a straight  
18 line. You have a right-of-way easement on either side  
19 of that transmission line.

20 A. Okay.

21 Q. Before, you were spraying this whole  
22 parcel aeri ally.

23 A. Understood.

24 Q. But now, because of the height of the  
25 transmission line, you can't spray this area,

1 **hypothetically.**

2 A. Hypothetically, yes.

3 Q. So now you have to do a ground  
4 application within these two areas if you're growing  
5 underneath the transmission line.

6 A. Okay.

7 Q. And there's a pole here and a monopole  
8 here (drawing).

9 A. Okay.

10 Q. If you're bringing your equipment in and  
11 you have crops in -- row crops -- it would be smaller  
12 rows, but when you get to this monopole, do you agree  
13 that you have to somewhat swerve to get around the  
14 pole to get back in line with your -- with your row  
15 crop, when you're doing the ground application?

16 A. It could be possible that you would have  
17 to swerve, yes.

18 Q. So if you had a crop there -- I guess  
19 there's -- there's one of two things: either you have  
20 a crop there and you damage it as you're swerving to  
21 get around that monopole or you as a farmer decide not  
22 to grow there because you're going to damage it to get  
23 around the monopole.

24 A. I mean, it depends on the crop; it  
25 depends on how you planted the field. You know, I've

1 seen a lot of areas where I've scouted in my life with  
2 transmission lines, and they've planted right around  
3 that with their planter at the same time and no crop  
4 damage has been done.

5 So, you know, it's -- you're still able  
6 to farm the field no matter what. Your techniques  
7 might have to change a little bit, but you never lose  
8 the ability to farm that field and you aren't damaging  
9 the crop around there, depending on your farming  
10 practices. Some people would not want to farm that  
11 way for unknown reasons and damage crop. That's their  
12 decision. But they still have the right to farm  
13 there.

14 MS. HERNANDEZ: I'll move that back after  
15 the questioning, if that's okay.

16 COMMISSIONER COLEMAN: Excuse me, Judge.  
17 I need to have it moved now.

18 MS. HERNANDEZ: Oh, I'm sorry.

19 JUDGE PRIDGIN: Thank you, Commissioner.

20 MS. HERNANDEZ: I was trying to save a  
21 little bit of time, but I'll do that now. I  
22 apologize. Thank you.

23 BY MS. HERNANDEZ:

24 **Q. I'd like to ask you a few questions about**  
25 **the United States Department of Agriculture**

1 **Conservation Research Program.**

2 A. All right.

3 **Q. In developing your testimony, isn't it**  
4 **true that you did not determine how many CRP parcels**  
5 **ATXI proposes to cross with this transmission line?**

6 A. Are you talking about research or the  
7 conservation reserve program? You mentioned research  
8 earlier.

9 **Q. The conservation -- did I say research?**  
10 **Conservation Reserve Program.**

11 A. Okay.

12 **Q. Sorry.**

13 A. Yeah.

14 **Q. In developing your testimony, isn't it**  
15 **true that you did not determine how many CRP -- and**  
16 **I'll refer to Conservation Reserve Program as CRP, if**  
17 **we can have that understanding?**

18 A. Yes, we can.

19 **Q. Okay. I'll repeat my question since I**  
20 **interrupted myself. In developing your testimony,**  
21 **isn't it true that you did not determine how many CRP**  
22 **parcels ATXI proposes to cross with this transmission**  
23 **line?**

24 A. That's correct.

25 **Q. And isn't it true that in developing your**

1 **testimony, you did not review any specific CRP**  
2 **contracts for parcels that ATXI proposes to cross with**  
3 **this transmission line?**

4 A. That's correct.

5 Q. **And in developing your testimony, isn't**  
6 **it true that you did not speak to any landowners about**  
7 **what CRP activities they participate in on their land?**

8 A. I personally did not do that. Correct.

9 Q. **And in developing your testimony, isn't**  
10 **it true that you did not speak to any local county**  
11 **representatives that enforce CRP contracts?**

12 A. I spoke to no county representatives, but  
13 I have spoken to the state representative.

14 Q. **But no local county representatives that**  
15 **enforce CRP contracts?**

16 A. What do you mean by "enforce"? Oversee  
17 would probably be a better word.

18 Q. **Okay. Oversee. That oversee the**  
19 **contracts.**

20 A. Correct.

21 Q. **I'll ask the same set of questions for**  
22 **the United States Department of Agriculture**  
23 **Conservation Stewardship Program. Can I -- I'm sorry.**  
24 **Go ahead.**

25 A. Okay.

1 Q. Can I refer to that as CSP?

2 A. Yes.

3 Q. Okay. In developing your testimony,  
4 isn't it true that you did not determine how many CSP  
5 parcels ATXI proposes to cross with this transmission  
6 line?

7 A. Correct.

8 Q. And in developing your testimony, isn't  
9 it true that you did not review any specific CSP  
10 contracts or -- for parcels that ATXI proposes to  
11 cross with this transmission line?

12 A. Correct.

13 Q. And in developing your testimony, isn't  
14 it true that you did not speak to any landowners about  
15 what CSP activities they participate in on their land?

16 A. Correct.

17 Q. And in developing your testimony, isn't  
18 it true that you did not speak to any local county  
19 representatives that over-- enforce -- or oversee, I  
20 think is the word we used, CSP contracts?

21 A. Correct.

22 Q. If I were to ask you the same set of  
23 questions for the United States Department of  
24 Agriculture Environmental Quality Incentives Program,  
25 would your answers be the same as those questions for

1 **CSP and CRP?**

2 A. Yes, they would.

3 MS. HERNANDEZ: No further questions.

4 Thank you.

5 JUDGE PRIDGIN: Ms. Hernandez, thank you.

6 Any Bench questions, Mr. Chairman?

7 CHAIRMAN HALL: No questions. Thank you  
8 for your testimony.

9 JUDGE PRIDGIN: Commissioner Stoll.

10 COMMISSIONER STOLL: No questions. Thank  
11 you for your testimony.

12 COMMISSIONER KENNEY: No questions.  
13 Thank you.

14 JUDGE PRIDGIN: Commissioner Coleman.

15 Thank you. Any redirect?

16 MR. TRIPP: Yes, Your Honor.

17 REDIRECT EXAMINATION BY MR. TRIPP:

18 **Q. You recall you were asked questions,**  
19 **Mr. DeJoya, about whether monopole would prevent the**  
20 **placement of center pivot irrigation on the property?**

21 A. Correct.

22 **Q. And what is your understanding at least**  
23 **in terms of the route design at this point and how it**  
24 **impacts existing center pivot irrigation?**

25 A. What I understood is that all existing

1 center pivot irrigation, and even irrigation systems  
2 that have been planned but not yet put into the air or  
3 put onto the ground, have been routed around  
4 throughout the entire length of the line.

5 **Q. For the final route?**

6 A. For the final route. Correct.

7 **Q. And so we're talking about where someone**  
8 **might place pivot irrigation in the future?**

9 A. Well, they are already have designs for  
10 that system.

11 **Q. Well, talking about where someone might**  
12 **place center pivot irrigation in the future that we**  
13 **don't know about.**

14 A. Yes. The final route is there.

15 **Q. Okay. So for center pivot irrigation,**  
16 **what water source is required?**

17 A. You usually need about 7.5 gallons per  
18 minute per acre. So on a 100-acre field, you'd need  
19 750 gallons, give or take a little bit. And that  
20 usually has to come from groundwater sources or  
21 surface water sources.

22 **Q. Is -- in northeast Missouri is**  
23 **groundwater a possible use -- can you use groundwater**  
24 **for center pivot irrigation?**

25 A. No -- no, not really, because there's not



1 a good aquifer that doesn't have high saline, high  
2 sodium concentrations, very saline soils -- or saline  
3 water that will destroy -- add salinity to your soils,  
4 ruin crop productivity in the groundwater in that part  
5 of the state. And then, also, you would have to then  
6 get stream flow water from somewhere, which can be  
7 limited at certain times of the growing season,  
8 especially during the middle of the summer.

9 **Q. Okay. I grew up up there and I think**  
10 **they call them cricks. It's probably creeks, but are**  
11 **those common sources of water in northeast Missouri?**

12 A. I couldn't speak whether they're common  
13 sources of being able to use for irrigation water.  
14 It'd be difficult to use them to have enough supply to  
15 adequately run your center pivot at all times.  
16 Certain people would probably have access to that,  
17 others wouldn't.

18 **Q. You were asked questions at the beginning**  
19 **of your -- of Ms. Hernandez's cross-examination about**  
20 **whether you farmed or ranched in any of the five**  
21 **counties that the line is going through. Do you**  
22 **recall those questions?**

23 A. Yes, I have.

24 **Q. Are you familiar at all with the -- the**  
25 **area up in northeast Missouri?**

1 A. Yes, I am.

2 **Q. How so?**

3 A. I've done quite a bit of work in my --  
4 you know, with my career in Pike County area. I've  
5 also -- used to work and do consulting for a company  
6 that's based in Macomb, Illinois, which is just across  
7 the Mississippi River from that part of the world.  
8 And then Iowa, I've done a lot of work up in Iowa, in  
9 the southeast portion of Iowa.

10 **Q. The fact that you've never farmed or**  
11 **ranchd in any of the five counties, does that in any**  
12 **way, in your mind, cause you to reconsider any of the**  
13 **opinions that you've given in your Surrebuttal**  
14 **Testimony?**

15 A. No. My Surrebuttal is based on the  
16 foundation of agronomy and soil science, and that  
17 translates to every area. Now, every area does do  
18 their practices a little bit different, but the  
19 foundation of it does not change.

20 **Q. Okay. And you were also asked about**  
21 **your -- whether you'd ever farmed or ranchd on a**  
22 **property that had a transmission line on it. Do you**  
23 **recall that question or those questions?**

24 A. Yes, I do.

25 **Q. Do you have any familiarity with farming**

1 **or ranching on areas where there's a transmission**  
2 **line?**

3 A. Yes. As -- as I was a crop consultant  
4 for two summers, I've went around the states of  
5 Nebraska and Kansas providing expert advice to farmers  
6 in those areas. A lot of farmers in those areas had  
7 transmission lines and poles. Back then it was mostly  
8 H-brace type of poles, and had to help consult through  
9 those areas and understand their issues with how they  
10 were farming in those areas.

11 **Q. So again, your -- does your lack of**  
12 **experience personally farming or ranching on a**  
13 **property that has a transmission line on it, does that**  
14 **cause you in any way to reconsider your opinions?**

15 A. No. And the crop consulting probably  
16 provides exper-- extra incentive for those opinions  
17 because I saw many different ways of doing it, not  
18 just one way. So I was able to see everyone's  
19 different approach to the same problem.

20 **Q. Okay. And I -- on the center pivot**  
21 **irrigation, I did have one more question I forgot to**  
22 **ask you about. That was: You said -- you disagreed**  
23 **that it would necessarily prevent you from putting**  
24 **center pivot irrigation on a parcel. What did you**  
25 **mean by that?**

1           A.     So center pivot irrigation are very --  
2 most people think of them as a round objects and that  
3 have to go in a complete circle. With the technology  
4 that's on these center pivots these days with iPad  
5 apps, iPhone apps, you can turn those pivots and have  
6 them go back. So you might have a half circle that  
7 goes windshield wiper, is what we call it, or you  
8 could even get a three-quarter circle that kind, for  
9 lack of better words, it Pacman's the issue that  
10 you're trying to resolve. Farmers and -- farmers do  
11 this all the time if they have a deep gully on their  
12 ranch or something like that where they can't make  
13 that full circle.

14           **Q.     Okay. You -- you were asked some**  
15 **questions about compaction, particularly whether you**  
16 **agreed that the heavier the object, the greater the**  
17 **compaction. You disagreed. Why?**

18           A.     Compaction is based on axle weight, not  
19 so much true weight. So a system like a crane has six  
20 axles on it and it weighs X pounds. So you divide X  
21 divided by six to get your weight per axle. A grain  
22 cart, a lot of times, is one of the heaviest pieces of  
23 equipment that's run on a farm for -- or as far as  
24 compaction because it has a lot of weight and usually  
25 only has one or two axles, so it's putting a lot of

1 force down onto that soil surface that the axle weight  
2 is forcing the compaction to occur. So it's more axle  
3 weight as opposed to true weight of the entire piece  
4 of equipment.

5 **Q. All right. Mr. DeJoya, you were asked**  
6 **some questions about compaction and its effect on crop**  
7 **yield.**

8 A. Yes.

9 **Q. Is it your testimony that the compaction**  
10 **caused by the construction of the line in this case**  
11 **will necessarily result in a reduced crop yield?**

12 A. If the compaction is not removed from the  
13 soil, it will have an effect on crop yield. However,  
14 through ATXI's procedures and plans for removing  
15 compaction from the soil after construction is done,  
16 compaction will not be an issue, and we will be able  
17 to reach full rooting depth of the corn crop at that  
18 time.

19 **Q. Okay. And when you talk about ATXI's**  
20 **procedures, you've reviewed the attachment to**  
21 **Mr. Brown's testimony; is that correct?**

22 A. That is correct.

23 **Q. All right. Just a few questions about**  
24 **CRP. First of all --**

25 A. Okay.

1           **Q.     -- just provide a brief explanation so**  
2 **we're all on the same page.**

3           A.     CRP is Conservation Reserve Program, and  
4 it is a program set up by the National USDA to take  
5 highly erodable land out of production and put it into  
6 a more natural grass setting. Over the years -- in  
7 the beginning it was mainly native grass. Over the  
8 years, they've changed and enhanced that program where  
9 you can have a lot of different grass, grass-type  
10 crops.

11                     But anyway, its intent is to take soil  
12 that is highly erodable or land that's not the best  
13 for row crop agriculture, convert it back into prairie  
14 grass-type of systems and never produce a true crop  
15 off of that.

16           **Q.     And even though you've not reviewed any**  
17 **CRP contracts of any of the landowners in this case,**  
18 **are you familiar with the general requirements of the**  
19 **CRP program?**

20           A.     Yes. I've worked with the CRP program on  
21 a lot of different projects throughout the country,  
22 and the CRP program is administered by a federal  
23 agency, so it's consistent across the states. And in  
24 each and every one of those states, as long as you  
25 return it back to its original condition before

1 construction, that contract stays intact for those  
2 landowners.

3 **Q. And I think you said earlier you talked**  
4 **to the state?**

5 A. Yeah. I talked to the --

6 **Q. State director?**

7 A. -- I believe it was the state resource  
8 conservationist. But he's Gerald Hrdina. Mr. Hrdina  
9 at the state office, and asked him if that was going  
10 to be the case in Iowa. And his biggest concern is  
11 that you have to get it back as quickly as possible  
12 and you have to return it with the same seed mixture  
13 that the landowner has on their conservation plan as  
14 part of that.

15 **Q. And what are ATXI's plans with regard to**  
16 **CRP?**

17 A. ATXI's plan is during the negotiation --  
18 as I understand them, is that during the negotiation  
19 for easement, they will ask the landowners if they  
20 have Conservation Reserve Program acreage, get that.  
21 And then that landowner has to allow ATXI to see his  
22 conservation program.

23 So we cannot walk into a NRCS office or  
24 FSA office and just say, I want to see Aaron DeJoi's  
25 CRP file. They won't give it to you. You have to

1 have a letter from them to allow you to see that.  
2 Then you can review that, look at the seed mix that  
3 was there, look at the practices that need to be  
4 employed in that and move forward from there.

5 ATXI is planning on coming back and  
6 seeding that mix-- seeding the same mixture or very  
7 similar mixture, because sometimes the grass seeds  
8 aren't available at certain times of the year as soon  
9 as practical during the right growing season. Because  
10 sometimes it's not good to seed in July, let's say,  
11 those grasses. You might have to wait till October.  
12 But it -- NRCS and the state office, that's as soon as  
13 practical to them. They don't want to see you seeding  
14 something in August that's not going to -- that's not  
15 going to achieve reclamation success.

16 **Q. Mr. DeJoya, you were asked questions**  
17 **about whether you talked to any county officials in**  
18 **Ms. Hernandez's question, and you talked about**  
19 **enforcement and you corrected it to oversee. Why?**

20 A. Because it's an overseeing process. It's  
21 not an enforcement process. This is a process that  
22 the landowners have taken row crop agriculture land on  
23 their own free will and returned it back to natural  
24 grasslands. Pretty much taken it out of agricultural  
25 production because they can't graze it, they can't hay



1 it until -- unless there's an emergency action by the  
2 federal government. Taking it out of production,  
3 their own free will. They're getting paid to put  
4 it -- "set it aside" is one term they use, and then  
5 allow that to stabilize the soils.

6 **Q. So is the county official, in your**  
7 **understanding, able to act contrary to the contract**  
8 **terms of the FSA handbook or guidelines established by**  
9 **the federal government?**

10 A. My understanding is, no, they're not able  
11 to.

12 **Q. Now, one last question about the CRP**  
13 **program. During the opening statement, Ms. Hernandez**  
14 **showed a picture of a parcel, a CRP parcel, and**  
15 **there's a diagonal line drawn right through it for the**  
16 **route?**

17 A. Right.

18 **Q. What's happening on that CRP parcel?**

19 A. Grass is growing and nothing else.

20 **Q. All right. And just the very last**  
21 **question and, really, I'll group the CSP program, the**  
22 **EQIP program together. Are you aware of anything**  
23 **that -- in terms of the construction of this**  
24 **transmission line that's going to prevent or negate in**  
25 **any way those contracts?**

1 A. Not to my knowledge.

2 Q. **All right. No other questions.**

3 JUDGE PRIDGIN: Mr. Tripp, thank you.

4 Mr. DeJoi a, thank you very much. You may step down.

5 And let me verify with counsel. Next  
6 witness will be Dr. Bailey?

7 MR. TRIPP: Yes.

8 JUDGE PRIDGIN: And after Dr. Bailey will  
9 be Mr. Powers?

10 Let's get Mi s-- excuse me, Dr. Bailey on  
11 the stand. Depending on the length of the Cross, we  
12 may break sometime in the middle, but we'll see if we  
13 can find a natural break.

14 If you'll raise your right hand to be  
15 sworn please, sir.

16 (Witness sworn.)

17 JUDGE PRIDGIN: Thank you very much.

18 Please have a seat and, Mr. Tripp, when you're ready,  
19 sir.

20 WILLIAM H. BAILEY testified as follows:

21 DIRECT EXAMINATION BY MR. TRIPP:

22 Q. **Yes. Would you please state your name,**  
23 **sir?**

24 A. William H. Bailey.

25 Q. **And by whom are you employed?**

1 A. Exponent.

2 Q. Okay. And you're testifying on behalf of  
3 Ameren Transmission Company of Illinois; is that  
4 correct?

5 A. Yes.

6 Q. And Mr. Bailey, did you cause to be  
7 prepared the Surrebuttal Testimony of William H.  
8 Bailey, Ph.D. marked as Exhibit 5?

9 A. I did.

10 Q. Do you have any corrections to that  
11 testimony?

12 A. Yes, I have some typographical errors to  
13 correct.

14 Q. Okay. What's the first one, and if you'd  
15 give the line and the page number, that would be  
16 helpful.

17 A. It's on page 24, line 7. The number 359  
18 should be 335, referring to a page number.

19 Q. All right. And what's the next one?

20 A. On -- also on page 24, line 14.

21 Q. Okay.

22 A. The number 50,000 should be 500,000.

23 Q. All right. Any others?

24 A. On page 27, line 16, after the word are,  
25 insert not.

1           **Q.     And are is the third word in 16?**

2           A.     Let me just check that out.

3                     It is the -- are is the third word from  
4 the -- from the end of the line on page 27.

5           **Q.     I'm sorry. I was -- Okay. Got it.**  
6 **Thank you. And are those all the corrections?**

7           A.     Yes.

8           **Q.     And if I were to ask you the same**  
9 **questions that are contained in your Surrebuttal**  
10 **Testimony today, would your answers under oath be the**  
11 **same, except for these corrections?**

12          A.     That's correct.

13          **Q.     All right. And did you give this**  
14 **testimony to your best knowledge and belief?**

15          A.     Yes.

16                     MR. TRIPP: Your Honor, I move to admit  
17 Exhibit 5 into the record and, upon receipt, tender  
18 Dr. Bailey for cross-examination.

19                     JUDGE PRIDGIN: Thank you. Exhibit 5 is  
20 offered. Any objections?

21                     Hearing none, Exhibit 5 is admitted.

22                     (ATXI Exhibit 5 was received into  
23 evidence.)

24                     JUDGE PRIDGIN: Cross-examination from  
25 Staff.

1 MR. WESTEN: Yes, Your Honor. Thank you.

2 JUDGE PRIDGIN: When you're ready.

3 MR. WESTEN: May I inquire from this  
4 table?

5 JUDGE PRIDGIN: Yes.

6 MR. WESTEN: Thank you.

7 CROSS-EXAMINATION BY MR. WESTEN:

8 Q. Hi, Dr. Bailey. My name is Jacob Westen.  
9 I am counsel for the Public Service Commission Staff.  
10 I have just a couple of quick questions for you. Do  
11 you happen to have a copy of your testimony with you  
12 up there?

13 A. Yes, I do.

14 Q. Could you, please, turn to page 6? And  
15 I'm looking at lines 6 through 8. And you have a  
16 sentence that says, Just as the heat from a radiator  
17 decreases as one moves farther away, the levels of  
18 both electric fields and magnetic fields decrease with  
19 distance from the sources.

20 Did I read that correctly?

21 A. Yes.

22 Q. Okay. I want you to keep that sentence  
23 in mind, and please turn to page 21 of your testimony.

24 A. Yes.

25 Q. And I'm looking at lines 12 through 13.

1 **And this is in relation to discussing a study that is**  
2 **cited by an opposing witness in this case. And you**  
3 **have the sentence, Distance itself is a poor predictor**  
4 **of actual magnetic field exposure.**

5 **Did I read that correctly?**

6 A. Yes.

7 **Q. Could you please square those two**  
8 **statements?**

9 A. In -- as a general principle, the  
10 field -- electric and magnetic field from any source  
11 diminish with distance.

12 **Q. Uh-huh.**

13 A. On the other hand, if you are using  
14 distance alone to try and estimate the level of  
15 magnetic field, that does not take into account the  
16 configuration of the source.

17 **Q. Uh-huh.**

18 A. It does not take into account the actual  
19 current flow on the line. And so, therefore, studies  
20 that have been done for human epidemiology purposes  
21 using simple distance have not found them to be good  
22 predictors of the magnetic field levels at specific  
23 locations for the reasons I indicated.

24 **Q. Okay. I have one other question for you.**  
25 **This is -- starts -- the source of this question is on**

1 **page 7 of your testimony. And this is lines 18 and**  
2 **19. And you state that -- here, that the ELF,**  
3 **magnetic field ELF frequencies in homes in the United**  
4 **States average about 1 milliGauss when not near a**  
5 **particular source.**

6 **What's the source of that information?**  
7 **Where did you get that number?**

8 A. Congress had developed a research program  
9 called The Rapid Program. And as part of that  
10 program, they commissioned studies of person's  
11 exposure to magnetic fields. And also there was a  
12 study done by the Electric Power Research Institute of  
13 measuring magnetic fields in a thousand randomly  
14 selected homes in the United States. And that is the  
15 basis for that statement.

16 **Q. So the one -- am I pronouncing that**  
17 **correctly, milliGauss?**

18 A. Yes.

19 **Q. That is an average based on the studies**  
20 **that you've just cited?**

21 A. Correct.

22 **Q. Dr. Bailey, does your testimony change if**  
23 **you are considering DC-based electric fields --**  
24 **electromagnetic fields?**

25 A. Yes. Yes.

1           **Q.     And how so?**

2           A.     The electric and magnetic fields  
3 associated with different sources vary with the  
4 frequency of that source.

5           **Q.     Uh-huh.**

6           A.     So the alternating current sources of  
7 electric and magnetic fields that we have in our homes  
8 from most transmission lines and so on, those fields  
9 oscillate 60 times per second. And so they interact  
10 with materials and objects differently than is if they  
11 do not oscillate, and DC transmission line is a source  
12 of static fields that do not oscillate 60 times per  
13 second. So this difference in frequency governs how  
14 these fields interact with the surrounding  
15 environment, and that difference would be taken into  
16 account in my assessment of potential interactions.

17           **Q.     What would be that assessment? How would**  
18 **your assessment change as to the safety of the EMF**  
19 **fields?**

20           A.     It would depend entirely upon what the  
21 magnitude of the fields are.

22           **Q.     Uh-huh.**

23           A.     We have different standards for magnetic  
24 fields at static frequencies than we do at extremely  
25 low frequencies or at 60 hertz. And so that is one



1 consideration that would be taken into account.

2 **Q. Does the World Health Organization have a**  
3 **classification -- or I'm sorry, the IARC have a**  
4 **classification for static magnetic fields as to their**  
5 **potential carcinogenicity?**

6 A. Yes.

7 **Q. And what is that classification?**

8 A. That's a classification three.

9 **Q. Okay. I don't have any further**  
10 **questions. Thank you.**

11 JUDGE PRIDGIN: All right. Thank you.  
12 counsel. MISO, any cross?

13 MR. SMALL: No questions, Your Honor.

14 JUDGE PRIDGIN: Public Counsel.

15 MR. OPITZ: No questions, Your Honor.

16 JUDGE PRIDGIN: Neighbors United. And  
17 Ms. Hernandez, could I inquire do you have an idea  
18 about how many minutes or how long your Cross will be?

19 MS. HERNANDEZ: Five minutes. It's not  
20 very long.

21 JUDGE PRIDGIN: Okay. Thank you.

22 CROSS-EXAMINATION BY MS. HERNANDEZ:

23 **Q. Good morning, Dr. Bailey.**

24 A. Good morning.

25 **Q. You are a neuropsychologist. Correct?**

1 A. Yes.

2 Q. Okay.

3 A. That's my degree.

4 Q. **And I just want to make sure I understand**  
5 **the study of neuropsychology. Neuropsychology is the**  
6 **study of structure and function of the brain as they**  
7 **relate to specific psychological processes and**  
8 **behaviors; is that correct?**

9 A. It could include that. That's not  
10 exclusive.

11 Q. **What else does neuropsychology include?**

12 A. In the program that I trained in, it also  
13 included the biological basis and the biological basis  
14 for these behaviors. So it wasn't just observation of  
15 behavior. It had to do with the biological  
16 relationship between the functions of the nervous  
17 systems and behavior.

18 Q. **Okay. Thank you for that. Are you a**  
19 **medical doctor?**

20 A. No, I am not.

21 Q. **So you do not diagnose or treat patients;**  
22 **is that correct?**

23 A. Correct.

24 MS. HERNANDEZ: May I approach?

25 JUDGE PRIDGIN: Yes, you may.

1 (NU Exhibit 60 was marked for  
2 identification.)

3 BY MS. HERNANDEZ:

4 Q. I've handed you what's been premarked  
5 Exhibit 60. Do you recognize this document?

6 A. I understand it to be a printout from our  
7 company website, but I can't say that I've actually  
8 seen this document before.

9 Q. Sorry. We keep shifting, so moving from  
10 line of sight.

11 Would you agree at the bottom of the page  
12 under How We Can Help, that section, the first  
13 sentence reads, We can assist utilities when energy  
14 developers, transmission developers and investors with  
15 all steps in wind power project from the project  
16 feasibility stage through commercial operations?

17 A. You read that correctly.

18 Q. Thank you. And then on the second page,  
19 fourth bullet point or arrow, it talks about  
20 environmental, social and public health impact and  
21 risk management capability, including EMF acoustics  
22 and aesthetics as your counseling services; is that  
23 correct?

24 A. That's what it says.

25 Q. Okay. And you work for Exponent, Inc.

1 **Is that correct?**

2 A. I do.

3 MS. HERNANDEZ: That's all I have. Thank  
4 you. I'm glad you made it here safely with all the  
5 snow out there.

6 THE WITNESS: Yes. At the airport there  
7 was 30 inches of snow the night before I left.

8 JUDGE PRIDGIN: Ms. Hernandez, thank you.  
9 Bench questions, Mr. Chairman?

10 CHAIRMAN HALL: No questions.

11 JUDGE PRIDGIN: Thank you. Commissioner  
12 Stoll.

13 COMMISSIONER STOLL: No questions. Thank  
14 you.

15 JUDGE PRIDGIN: Commissioner Kenney.

16 COMMISSIONER KENNEY: No questions.

17 Thank you, sir.

18 JUDGE PRIDGIN: Commissioner Coleman.

19 COMMISSIONER COLEMAN: No.

20 JUDGE PRIDGIN: Redirect.

21 MR. TRIPP: Briefly.

22 REDIRECT EXAMINATION BY MR. TRIPP:

23 **Q. Dr. Bailey, you were asked questions**  
24 **about your Ph.D. in neuropsychology and the fact that**  
25 **you're not a medical doctor. Do you recall those**

1 **questions?**

2 A. Yes.

3 **Q. Do you have any specialized education or**  
4 **training in the effects on EMF on health?**

5 A. I have 30 years of experience in research  
6 in this area. My -- my thesis research involved  
7 measuring biological changes in the -- in the brain  
8 and the body as a result of genetic disorders and, I  
9 continued my training in neurochemistry for two years  
10 at the Rockefeller University. And that research led  
11 directly into studies in which I performed  
12 measurements on animals that had been exposed to  
13 magnetic fields, and that -- that research has  
14 continued over the next 30 years.

15 **Q. And it's summarized in your CV that's**  
16 **attached to your testimony?**

17 A. That's correct.

18 **Q. Do you only provide EMF expertise to**  
19 **utility companies?**

20 A. No. Quite a number of local, state and  
21 federal agencies have come to me because my background  
22 and experience to update them on the status of  
23 research on electric and magnetic field in this area.

24 MR. TRIPP: All right. I don't have any  
25 other questions, Your Honor.

1 JUDGE PRIDGIN: Okay, Mr. Tripp. Thank  
2 you very much.

3 Dr. Bailey, thank you very much. You may  
4 be excused.

5 Before we take a break, let me verify  
6 with counsel, we will move on to Mr. Powers, who is a  
7 Neighbors United witness; is that correct?

8 MR. LOWERY: That's correct, Your Honor.

9 JUDGE PRIDGIN: And back to ATXI  
10 Witnesses Vosberg and Wood?

11 MR. LOWERY: Correct, Your Honor.

12 JUDGE PRIDGIN: Anything else from  
13 counsel before we go to break?

14 MS. HERNANDEZ: Yes, Your Honor. If I  
15 could offer Exhibit 60. I forgot to do that. I  
16 apologize.

17 JUDGE PRIDGIN: Exhibit 60 is offered.  
18 Any objections?

19 Hearing none, Exhibit 60 is admitted.

20 (NU Exhibit 60 was received into  
21 evidence.)

22 JUDGE PRIDGIN: Anything further before  
23 we take a break? I show the clock back here showing  
24 about five after. Let's take a break until about  
25 10:25, please. Thank you. We're off the record.

1 (A recess was taken.)

2 JUDGE PRIDGIN: Good morning. We are  
3 back on the record. I understand we are moving on to  
4 Neighbors United witness, and that would be Mr. Powers  
5 and then back to Mr. Vosberg and Mr. Wood, which are  
6 ATXI witnesses.

7 MR. LOWERY: Correct, Your Honor.

8 JUDGE PRIDGIN: Anything further before  
9 Mr. Powers takes the stand? Okay. Hearing nothing,  
10 Mr. Powers, if you'd take the stand. If you'll raise  
11 your right hand to be sworn, please.

12 (Witness sworn.)

13 JUDGE PRIDGIN: Thank you, sir.  
14 Ms. Hernandez, when you're ready.

15 WILLIAM EDWARD POWERS, testified as follows:

16 DIRECT EXAMINATION BY MS. HERNANDEZ:

17 Q. Good morning, Mr. Powers.

18 A. Good morning.

19 Q. Could you, please, state your name for  
20 the record, please?

21 A. William Edward Powers.

22 Q. And by whom are you employed?

23 A. Powers Engineering.

24 Q. And are you the same William E. Powers  
25 that prepared the Rebuttal Testimony in this case

1 **premarked Exhibit 42?**

2 A. I am.

3 **Q. And did you also prepare the Surrebuttal**  
4 **Testimony in this case premarked Exhibit 43?**

5 A. I did.

6 **Q. And I just want to reference for**  
7 **clarification the name on your Surrebuttal Testimony**  
8 **is Bill Powers versus William E. Powers?**

9 A. That is correct.

10 **Q. Okay. You prepared both of those**  
11 **documents?**

12 A. Yes.

13 **Q. Do you have any changes to make to either**  
14 **of these documents?**

15 A. I do have some corrections to the  
16 Rebuttal Testimony.

17 **Q. All right. Please state them.**

18 A. Page 5, line 18, the word biomass should  
19 be landfill. Page 8, line 9, Palmyra should be  
20 Maywood. Page 15, line 10, Appaloose should be  
21 Appanoose, and that correction occurs several times in  
22 the text. Page 20, line 3, delete the phrase "the  
23 simultaneous loss of." Page 26, line 6, dollar sign 5  
24 should be dollar sign 4.

25 MR. LOWERY: I apologize, Mr. Powers.



1 Can you give me that one again, please?

2 THE WITNESS: Page 26, line 6. Currently  
3 there's a dollar sign 5 at the end of that line. It  
4 should be dollar sign 4, meaning 4 million.

5 MR. LOWERY: Thank you.

6 THE WITNESS: Last edit, page 41, line 7,  
7 delete the phrase "on the." And that is it for  
8 corrections. I have no corrections to the Surrebuttal  
9 Testimony.

10 BY MS. HERNANDEZ:

11 Q. Okay. Thank you. If I were to ask you  
12 the questions contained in your Surrebuttal and  
13 Rebuttal Testimony, would your answers be the same  
14 today?

15 A. They would.

16 Q. And is your Rebuttal Testimony and  
17 Surrebuttal Testimony true and accurate to the best of  
18 your knowledge, information and belief?

19 A. Yes.

20 MS. HERNANDEZ: I would offer Exhibit 42  
21 and 43 at this time and tender the witness for Cross.

22 JUDGE PRIDGIN: All right. Any  
23 objections?

24 MR. LOWERY: Other than our standing  
25 objection, Your Honor, no.

1 JUDGE PRIDGIN: All right. Thank you.  
2 I'll show Exhibits 42 and 43 admitted subject to  
3 ATXI's prior filed objection.

4 (NU Exhibits 42 and 43 received into  
5 evidence.)

6 JUDGE PRIDGIN: Cross-examination, Public  
7 Counsel.

8 MR. OPITZ: No cross, Your Honor.

9 JUDGE PRIDGIN: Thank you. Staff?

10 CROSS-EXAMINATION BY MS. MYERS:

11 Q. Yes, Mr. Powers. I'm Jamie Myers with  
12 Staff counsel, and I just have a few questions for  
13 you.

14 Do you have a copy of your Rebuttal  
15 Testimony in front of you?

16 A. I do.

17 Q. And could you go to page 21, please.

18 A. I am there.

19 Q. Okay. Starting with line 8, you discuss  
20 the Western Electricity Coordinating Council, known as  
21 WECC, and how they had petitioned NERC to reclassify  
22 their transmission lines. Correct? Well, a few of  
23 the transmission lines in the WECC footprint.

24 A. Correct.

25 Q. What states make up the WECC footprints?

1           A.     It's basically the western United States,  
2 west of Texas, say west Texas following a line north  
3 up into Canada. So western Canada and western US.

4           **Q.     Okay. And further down, starting with**  
5 **line 18 and running onto the next page, you seem to**  
6 **imply that here we could possibly petition to have**  
7 **these lines reclassified; is that correct?**

8           A.     That is correct.

9           **Q.     Is that a fair characterization? And --**  
10 **and why do you say that we could qualify for**  
11 **reclassification?**

12          A.     Well, WECC is one of eight entities that  
13 have been delegated enforcement of reliability -- NERC  
14 reliability criteria around the country. And there is  
15 a procedure to ensure that there is consistency  
16 between these entities. And the -- it's a matter of  
17 having CERC, which is regulating eastern Missouri,  
18 corroborate that this same -- the same criterion would  
19 apply in this case. And they have a formal procedure  
20 for it. I contacted them two weeks ago and said, Will  
21 you look at this as CERC and make a determination  
22 whether this would apply in this case?

23          **Q.     Okay. And next I'd like to reference an**  
24 **exhibit that you attached to your testimony. It's**  
25 **listed as PE-17. Do you have a copy of that with you?**

1 A. I do. I am there.

2 Q. Okay. And so on the back -- on page 2,  
3 actually, of this exhibit, you list the successful  
4 petitions that were reclassified. Correct?

5 A. Correct.

6 Q. And one of those is the Palo Verde  
7 West Wing Line; is that correct?

8 A. Correct.

9 Q. Okay.

10 MS. MYERS: May I approach the witness?

11 JUDGE PRIDGIN: Yes, you may.

12 BY MS. MYERS:

13 Q. This is for you.

14 A. Thank you.

15 Q. I believe we're up to 61; is that  
16 correct?

17 JUDGE PRIDGIN: Correct.

18 (Staff Exhibit 61 was marked for  
19 identification.)

20 BY MS. MYERS:

21 Q. So what I've handed you, Mr. Powers, is  
22 the executive summary of the report that was done in  
23 the Palo Verde West Wing analysis. Correct?

24 A. That is correct.

25 Q. And if you'll look at this, there are 16

1 **mitigating factors that led to the reclassification of**  
2 **that -- of that line. Correct?**

3 A. Correct.

4 Q. **So could you hone in on factor 8 and 10,**  
5 **please? So factor 8 is a reference to how many**  
6 **lightning strikes there are in the area. Correct?**

7 A. Correct.

8 Q. **Are you familiar with how many lightning**  
9 **strikes occur in Missouri?**

10 A. No.

11 Q. **So could you say that Missouri would be**  
12 **of a similar status here of lightning strikes?**

13 A. I leave that for CERC to determine.

14 Q. **And then what about the risks of flood,**  
15 **snow and fire that were negligible in the Palo Verde**  
16 **and West Wing lines; would those also be negligible in**  
17 **northeast Missouri?**

18 A. I would not think they're negligible but,  
19 again, that would be for CERC to evaluate.

20 Q. **So we can't say for certain that we'd**  
21 **qualify for reclassification here.**

22 A. No. But if you're looking at ratepayers  
23 spending 18 million for their share of this, it's  
24 worth Missouri PSC investigating.

25 Q. **Well, and that kind of leads to my last**

1 **question, and I simply want a yes, no or I don't know**  
2 **here. So would you agree that this project, Mark**  
3 **Twain project, would improve reliability in northeast**  
4 **Missouri?**

5 A. I would agree that it's one of the  
6 available alternatives to addressing the reliability  
7 issues that were raised in the application.

8 **Q. So is that a yes, it would increase**  
9 **reliability?**

10 A. Yes.

11 **Q. All right. Thank you, Mr. Powers. I**  
12 **have no further questions.**

13 **And Judge, I move to admit Exhibit 61.**

14 JUDGE PRIDGIN: Sixty-one has been  
15 offered. Any objections?

16 Hearing none, 61 is admitted.

17 (Staff Exhibit 61 was received into  
18 evidence.)

19 JUDGE PRIDGIN: Ms. Myers, thank you.  
20 MISO any questions?

21 MR. SMALL: Yes, Your Honor. Thank you  
22 very much.

23 CROSS-EXAMINATION BY MR. SMALL:

24 **Q. Good morning, Mr. Powers.**

25 A. Good morning.

1 Q. My name is Jeff Small. And I represent  
2 Mid-Continent Independent System Operator, normally  
3 referred to as MISO. Mr. Powers, would you, please,  
4 turn your attention to page 34 of your Rebuttal  
5 Testimony? Let me know when you're there.

6 A. I'm there.

7 Q. And that's been marked for the reference  
8 in the room as Exhibit 42 in this proceeding. On page  
9 34, lines 3 through 5 of your Rebuttal Testimony, it  
10 contains a section heading. And that section states,  
11 The Economic Benefit Of Wind Power Over Solar Power  
12 Presumed By MISO And ATXI Is Absol -- Obsolete, comma,  
13 Invalidating the MVP Cost Benefit Analysis. Do you  
14 see that?

15 A. I do.

16 Q. Okay. For purposes of this question and  
17 answer, do you understand the MVPs to be -- the MVP  
18 portfolio to be a group of transmission projects  
19 planned by MISO?

20 A. I do.

21 Q. And are you familiar with the reports  
22 concerning the MVP? One of them is mentioned in your  
23 testimony on line 15, the triennial review.

24 A. Yes.

25 Q. And so, if I refer to the MVP projects,

1 you understand that the Mark Twain project is part of  
2 one of the -- the MVP portfolio?

3 A. I do.

4 Q. Okay. I don't see in any of your  
5 testimony that section that I referred to or any other  
6 part of your pre-filed testimony in this case that  
7 discusses any modeling or studies on the proposed  
8 transmission project that you've conducted. Have --  
9 you don't -- you haven't conducted any studies that  
10 would provide an alternative benefit cost analysis for  
11 all or part of the MVP group of transmission projects,  
12 have you?

13 A. No. Just compared solar and wind  
14 pricing.

15 Q. And is it fair to summarize your position  
16 in this case as being that MISO's analyses assume that  
17 the renewable generation will take the form of wind  
18 power instead of solar?

19 A. Yes.

20 Q. And so if fundamentally it's just this  
21 place held for wind power in MISO's analysis that is  
22 your -- the basis for your considering MISO's cost  
23 benefit analysis, in your words, invalidated; is that  
24 correct?

25 A. Let me just repeat that back briefly to



1 make sure I understand it. That the -- that the sole  
2 point that I am saying that the MISO cost analysis is  
3 obsolete is because I'm asserting that the presumption  
4 that wind power drives the economic benefit is  
5 obsolete is incorrect.

6 **Q. That is the question, yes.**

7 A. Yes.

8 **Q. And your answer is yes?**

9 A. Yes.

10 **Q. Mr. Powers, would you, please, turn to**  
11 **page 2 of that same Rebuttal Testimony?**

12 A. I am there.

13 **Q. And on lines 7 and 8.**

14 A. I am there.

15 **Q. You refer to your -- your educational**  
16 **background as -- shows a Master's in Public Health and**  
17 **Environmental Sciences; is that correct?**

18 A. That is correct.

19 **Q. And what year did you receive your**  
20 **degree?**

21 A. From Duke University, 1978. From  
22 University of North Carolina-Chapel Hill, 1981.

23 **Q. And what has been your experience, since**  
24 **receiving your degree in -- your degree in -- your**  
25 **master's degree, in encouraging the development of**

1 **wind power?**

2 A. I did have a contract to the wind  
3 developer in the '90s to look at wind development in a  
4 portion of southern California. That's the last --  
5 possibly only contract I had with a wind developer.

6 **Q. And what was the result of your work in**  
7 **that case?**

8 A. That case was actually looking at a new  
9 design for a wind turbine, and they chose not to  
10 pursue it.

11 **Q. All right. Thank you very much. I have**  
12 **no further questions.**

13 JUDGE PRIDGIN: Mr. Small, thank you.  
14 Excuse me. Mr. Small, thank you.

15 ATXI.

16 MR. LOWERY: Thank you, Your Honor.

17 CROSS-EXAMINATION BY MR. LOWERY:

18 **Q. Good morning, Mr. Powers.**

19 A. Good morning.

20 **Q. I take it you have your two testimonies**  
21 **with you; is that correct?**

22 A. I do.

23 **Q. Do you have a copy of your deposition**  
24 **with you?**

25 A. No.

1           **Q. I'm going to go ahead and give you one.**

2           MR. LOWERY: Your Honor, if it's okay I  
3 approach.

4           JUDGE PRIDGIN: You may.

5           MR. LOWERY: Just in case you need it.

6           THE WITNESS: Thank you.

7 BY MR. LOWERY:

8           **Q. I'd like to begin by talking about your**  
9 **background a bit since you have significant testimony**  
10 **about the appropriateness of the proposed line and the**  
11 **need for it. You have never been a transmission**  
12 **system planner; isn't that fair to say?**

13          A. That is fair.

14          **Q. And you don't dispute the need to plan**  
15 **the transmission for operations over a long period of**  
16 **time, for example, over ten years, do you?**

17          A. I don't dispute the need for long-term  
18 planning. The ten-year target is a standard for  
19 transmission planning.

20          **Q. You've never designed a transmission**  
21 **system. Correct?**

22          A. That is correct.

23          **Q. While you indicate that you have**  
24 **evaluated transmission system upgrades, you've never**  
25 **actually been the designer. You've never actually**

1 **been responsible for authorizing a transmission system**  
2 **upgrade; isn't that right?**

3 A. No, I have not been authorized or  
4 responsible for authorizing that.

5 **Q. You've had no specific education or**  
6 **training related to transmission planning,**  
7 **construction or operation, have you?**

8 A. That is correct.

9 **Q. You've never been employed by an electric**  
10 **utility or a regional transmission organization in a**  
11 **transmission planning function; isn't that correct?**

12 A. That is correct.

13 **Q. Now, you also discuss in your testimony**  
14 **what you call "focused energy efficiency" and you**  
15 **address the possible use of demand response; is that**  
16 **right?**

17 A. Yes.

18 **Q. You have no specialized education or**  
19 **experience in designing or in operating energy**  
20 **efficiency programs; isn't that right?**

21 A. I have written two reports on that topic,  
22 but I have no special educational training in that  
23 area.

24 **Q. You've never conducted a demand-side**  
25 **management potential study. Correct?**

1 A. That is correct.

2 Q. Now, you include some schedules to your  
3 testimonies relating to things like bat habitat,  
4 streams, etc., do you not?

5 A. I do.

6 Q. You're not a wildlife biologist, are you?

7 A. I am not.

8 Q. You're not a forester, are you?

9 A. I am not.

10 Q. You've never conducted a wetlands  
11 delineation; isn't that true?

12 A. That is correct.

13 Q. You've never conducted an endangered or  
14 threatened species assessment on a project, have you?

15 A. I have not.

16 Q. You're not an expert in birds or bats or  
17 bees; isn't that true?

18 A. That is true.

19 Q. Now, your Surrebuttal Testimony, you  
20 attach the testimony of Tim Woolf of Sierra Club from  
21 a different case involving Ameren Missouri; isn't that  
22 right?

23 A. I think Mr. Woolf is with Synapse Energy  
24 Economics.

25 Q. But he was testifying on behalf of Sierra

1 **Club, was he not?**

2 A. That is correct.

3 **Q. And isn't it true that you cite that**  
4 **testimony for the proposition that Ameren Missouri's**  
5 **failure to include demand response options in its last**  
6 **Missouri energy efficiency investment application --**  
7 **or cycle was controversial. That's the point you were**  
8 **making; isn't that right?**

9 A. That is correct.

10 **Q. But in fact, when you look at Mr. Woolf's**  
11 **testimony, isn't it true that he doesn't mention**  
12 **demand response programs in that testimony, does he?**

13 A. He doesn't, but Missouri PSC Staff does  
14 and the exhibit you used in the deposition.

15 **Q. But Mr. Woolf, in the testimony you**  
16 **relied upon for the proposition that the failure to**  
17 **have demand response was controversial, he doesn't**  
18 **even mention demand response, does he?**

19 A. That is correct.

20 **Q. You didn't independently verify the**  
21 **various facts and figures that Mr. Woolf cited to in**  
22 **that testimony you attached, did you?**

23 A. I did not.

24 **Q. Now, you point out in your testimony, I**  
25 **think it's your Rebuttal Testimony, that there is**

1 about 450 megawatts of wind generation in place in  
2 Missouri, most of which is supplying power to Missouri  
3 cooperatives; is that right?

4 A. That is correct.

5 Q. Now, the cooperatives in Missouri, as you  
6 understand it, are not subject to Missouri's renewable  
7 energy standard; is that right?

8 A. As I understand it, yes.

9 Q. But in -- nevertheless, they've  
10 contracted or own, I don't know which, about 300  
11 megawatts of wind generation; isn't that right?

12 A. That is correct.

13 Q. Now, MISO has identified two wind zones  
14 in Missouri that it discusses in its MVP analyses,  
15 including it's 2014 triennial review. Do you  
16 understand that?

17 A. Yes.

18 Q. One of them -- they call it Missouri  
19 Zone A and Missouri Zone C. Do you recall that?

20 A. I do.

21 Q. And Missouri's Zone A is in northwest  
22 Missouri, where this existing generation we were  
23 talking about just a minute ago is located; is that  
24 right?

25 A. That is correct.

1           **Q.     And Missouri C is in north central ,**  
2 **northeast Missouri. I think you've called it the**  
3 **Adair wind zone. And the Mark Twain line is proposed**  
4 **to run through Missouri Zone C; is that right?**

5           A.     That is correct.

6           **Q.     Now, MISO has indicated, I think it's**  
7 **part of its triennial review, that the MVP projects**  
8 **enable about 1,347 megawatts of wind that could be**  
9 **connected in Missouri Zone C to the MVP portfolio. Do**  
10 **you understand that?**

11          A.     I understand that they have upped their  
12 estimate from 500 megawatts to 1,347 of potential wind  
13 that could tie in. Is that your statement?

14          **Q.     My simple question is: Didn't MISO**  
15 **conclude that, with the MVP projects in place, that**  
16 **1,340 -- that the transmission line could accommodate**  
17 **1,347 megawatts of wind from Missouri Zone C?**

18          A.     I didn't interpret it that way. I  
19 interpreted it to indicate that the potential of that  
20 area increased to 1,347 megawatts.

21          **Q.     So I guess the answer to my question is,**  
22 **you're not really sure what the 1,347 represents?**

23          A.     I'm pretty sure. We did talk about that  
24 in the deposition, that the MISO had boosted the  
25 potential for Missouri Zone C. It's not directly



1 related to the ability of Mark Twain to export 1,347  
2 megawatts. It's related to an increase in wind  
3 potential for that area.

4 **Q. Well, we'll ask Mr. Smith about it when**  
5 **he takes the stand, since he was actually involved, I**  
6 **think, in the analysis.**

7 **When MISO came up with that 1,347**  
8 **megawatt number -- and I can show you this if I need**  
9 **to, but they were using a capacity factor of**  
10 **33 percent for that wind. Do you recall that?**

11 A. For Missouri Zone C?

12 **Q. Yes.**

13 A. I think you're right.

14 **Q. And you agree, I think, that the**  
15 **33 percent that MISO was assuming, certainly within**  
16 **the recommend of possibility for capacity factor for**  
17 **wind in that area, do you not?**

18 A. Yes.

19 **Q. And you also agree that the Midwest is a**  
20 **prime development area for wind and that, as wind**  
21 **development continues, a significant portion of it**  
22 **will be in the Midwest area, do you not?**

23 A. I do not agree going forward that the  
24 Midwest is a prime development area for wind.

25 **Q. Could you turn to page 54 of your**

1 **deposition, please?**

2 A. I am there.

3 Q. **And I'm in particular looking at lines 6**  
4 **through 13. I'm going to ask you, if I asked you this**  
5 **question that you gave this answer. Question would**  
6 **be --**

7 A. Excuse me for just one second. You  
8 mean -- which page 54 are we talking about?

9 Q. **I'm talking about of the actual**  
10 **transcript, not -- each page has four pages on it.**  
11 **Right?**

12 A. Okay. I am there.

13 Q. **You see page 54 in the lower left-hand**  
14 **corner of what, I guess, is page 14 of the actual**  
15 **printout. Do you see that?**

16 A. Yes.

17 Q. **And I asked you the following question:**  
18 **Would you agree that a significant amount of wind --**  
19 **excuse me, a significant amount of the offshore wind**  
20 **development that would occur in the next five or ten**  
21 **years in the United States is probably going to occur**  
22 **in the Midwest. And you answered, The Midwest is a**  
23 **prime development area for wind power, and so I would**  
24 **expect that as wind development continues, a**  
25 **significant portion of it will be in the Midwest.**

1                   **Did I read that correctly?**

2           A.     You did, but you've got to read the next  
3 paragraph. You've taken this out of context,  
4 Counselor.

5           **Q.     Mr. Powers, if I ask you a yes or no**  
6 **question, I expect you to give me a yes or no answer,**  
7 **please.**

8           A.     You asked me a hypothetical question here  
9 and you got an answer to a hypothetical.

10           MR. LOWERY: Your Honor, I'm entitled to  
11 impeach the witness with his deposition.  
12 Ms. Hernandez can ask him questions on redirect if she  
13 chooses to.

14           JUDGE PRIDGIN: Do I hear an objection?

15           MR. LOWERY: I move to strike his  
16 non-responsive answer after he confirmed that I read  
17 the deposition correctly.

18           JUDGE PRIDGIN: Objection sustained. You  
19 can just answer the questions, Mr. Powers.

20 BY MR. LOWERY:

21           **Q     You've never developed wind generation**  
22 **potential estimates for an area, have you?**

23           A.     Could you repeat that question?

24           **Q.     You have never developed wind generation**  
25 **estimates -- potential estimates for a particular**

1 area, have you?

2 A. No.

3 Q. You don't consider yourself to be a wind  
4 development expert, do you?

5 A. I do not.

6 Q. Now, you posit some reasons why one prior  
7 wind project that had been considered up in north  
8 Missouri, the Shut Eye Creek project, did not develop.  
9 Right? You posit some reasons in your Rebuttal  
10 Testimony; is that true?

11 A. I do.

12 Q. But it's fair to say, is it not, that,  
13 just because that one project didn't develop, that  
14 fact alone does not tell us whether or not wind will  
15 develop in north Missouri; isn't that fair?

16 A. That is correct.

17 Q. Now, wind generation that may develop in  
18 Missouri Zone C that could connect to the Mark Twain  
19 line, that wind could ultimately be delivered to  
20 Ameren Missouri and its customers, as well as other  
21 load-serving entities like cooperatives or  
22 municipalities, that are embedded in Ameren Missouri's  
23 transmission system; isn't that right?

24 A. That is correct.

25 Q. Now, let's talk about one of your

1 **schedules and how it relates to the argument you make**  
2 **about wind versus solar. One of your schedules is**  
3 **PE-28, is it not?**

4 A. I have that.

5 MR. LOWERY: Your Honor, I need to get an  
6 exhibit marked, please.

7 JUDGE PRIDGIN: This will be 62.

8 (ATXI Exhibit 62 was marked for  
9 identification.)

10 BY MR. LOWERY:

11 Q Mr. Powers, I've handed you what's been  
12 marked for identification as Exhibit 62. And do you  
13 recognize that document as being the entire  
14 presentation, a portion of which you attach as a  
15 schedule PE-28 to your Rebuttal Testimony?

16 A. I do.

17 Q. Now, as I understand it, DOE -- and when  
18 I say DEO, you understand I mean U.S. Department of  
19 Energy. Correct?

20 A. Correct.

21 Q. As I understand it, DOE's Sunshot  
22 Initiative, which is talked about in this Exhibit 62,  
23 in general terms is a DOE program that's designed to  
24 collaborate with a variety of folks, including those  
25 in the solar industry, to promote the development of

1 solar as a generation source; is that fair?

2 A. That's one way to look at it.

3 Q. And DOE has a similar initiative called  
4 Wind Vision. That, too, is directed toward promoting  
5 the use of wind as an alternative to traditional --  
6 I'll call them traditional fossil-based sources of  
7 generation; is that fair?

8 A. I'm not familiar with that program, but I  
9 will take your word for it.

10 Q. So you're not familiar with the Wind  
11 Vision program at all?

12 A. No.

13 Q. Now, what the sponsors of the PowerPoint,  
14 Exhibit 62, did is, they put together a presentation  
15 and they reported data about solar costs and  
16 installations that's out there; isn't that right?

17 A. That is correct.

18 Q. And they're reporting, for example,  
19 particularly in the slide that you point to in your  
20 PE-28, they're reporting information from various  
21 analysts, for example. Right?

22 A. That is correct.

23 Q. Folks like Bloomberg Energy, Stifel  
24 Nicholas. Right?

25 A. That is correct.

1 Q. Now, when you were comparing the cost of  
2 wind to the cost of solar in your Rebuttal  
3 Testimony -- and I'm in particular talking around  
4 pages 36, 37, you performed some calculations. And  
5 when you performed those calculations for wind, you  
6 were assuming a 28 percent capacity factor. Right?

7 A. That is correct.

8 Q. And you have to take capacity factors  
9 into account if you want to look at the relative cost  
10 of wind versus solar. In other words, you've got to  
11 account for the different capacity factors between the  
12 two technologies if you want to compare them on an  
13 apples-to-apples basis, do you not?

14 A. Correct.

15 Q. Now, you cite to one source, and I  
16 believe it's one page in your PE-27, for the claim  
17 that the capital cost of wind is assumed to go up in  
18 the future by some undefined amount. Right?

19 A. I think that source is the same DOE.

20 Q. I agree. You cite to one DOE report.  
21 Correct?

22 A. Correct.

23 Q. And that's a -- do you recall that's a  
24 222-page report. Does that sound about right?

25 A. That does sound about right.

1           **Q.     And you, I think, included page 192 from**  
2 **that report as your Exhibit PE-27. Right?**

3           A.     I will take your word for the page  
4 number.

5           **Q.     So to judge the competitiveness of**  
6 **various resources, one thing we have to account for is**  
7 **the capacity factors between the generation. Right?**

8           A.     Correct.

9           **Q.     Now, the comparisons that you made**  
10 **between wind and solar, page 37, line 712, you made**  
11 **those comparisons based upon capital costs, capital**  
12 **cost numbers for each technology and some assumed**  
13 **capacity factors each technology. Right?**

14          A.     Correct.

15          **Q.     Now, there are some other factors that**  
16 **could affect the ultimate cost of energy from wind and**  
17 **solar, liked fixed and variable ONM, but in the case**  
18 **of wind and solar, in particular, those are not nearly**  
19 **as material as the impact of the capital cost; isn't**  
20 **that fair?**

21          A.     That is fair.

22          **Q.     So if we calculate some numbers using**  
23 **just the capital cost and capacity factor, we're going**  
24 **to include key variables that you yourself included**  
25 **when you made comparisons. Right?**



1 A. Correct.

2 Q. Now, I'm going to ask you to verify some  
3 calculations for me using capital costs and capacity  
4 factors for these technologies. And the calculations  
5 I'm going to ask you to verify will include, taking  
6 the capital cost on the dollar per kilowatt basis and  
7 dividing the capacity factor in whole number percents.  
8 Do you understand the approach?

9 A. I do.

10 Q. For example, if the capital cost is  
11 \$2,000 per KW and I have a capacity factor of  
12 40 percent, I would divide 2,000 by 40 and I would get  
13 50 as a result; isn't that right?

14 A. Correct.

15 Q. Do you happen to have a calculator with  
16 you?

17 A. I don't.

18 MR. LOWERY: May I approach, your Honor?

19 JUDGE PRIDGIN: You may.

20 BY MR. LOWERY:

21 Q This is a very simple one, but I think  
22 it'll work. All you have to do is hit On CA for it  
23 come on.

24 A. We're off to a good start.

25 Q. I'm sure it's not nearly as sophisticated

1 as the engineering calculators you would use.

2 Now, you agreed with me before that a  
3 reasonable -- reasonable capacity factor for solar in  
4 Missouri, if you assume a mix -- an equal mix of fixed  
5 panels and access tracking panels would be about  
6 20 percent, did you not?

7 A. Right. Or 22 percent for a single-axis  
8 tracker.

9 Q. Right. But if you assumed a mix of  
10 50/50, fixed is 18, tracking's 22, you'd get an  
11 average capacity factor of 20, would you not?

12 A. That is the average of the two numbers.  
13 Correct.

14 Q. That's not unreasonable to expect, that  
15 you would have a mix in Missouri of fixed and  
16 tracking, is it not?

17 A. But you wouldn't have a mix at a single  
18 site. It would either be single-axis tracking or it'd  
19 be fixed.

20 Q. But I didn't limit my question to a  
21 single site. I said solar in Missouri overall; isn't  
22 that fair?

23 A. That is fair.

24 MR. LOWERY: Your Honor, I need to get a  
25 couple more exhibits marked, please. For you,

1 Mr. Powers, this will be --

2 JUDGE PRIDGIN: I've got 63.

3 MR. LOWERY: Sixty-three. Thank you.

4 And while we're at it, Judge, I'll just mark a couple  
5 more, if that's okay.

6 (ATXI Exhibit 63 was marked for  
7 identification.)

8 MR. LOWERY: This will be 64 and 65, Your  
9 Honor.

10 (ATXI Exhibit 64 and 65 were marked for  
11 identification.)

12 MR. LOWERY: Your Honor, I'd first like  
13 to deal with 64 and 65 first, if you're ready.

14 JUDGE PRIDGIN: When you're ready,  
15 Counsel.

16 MR. LOWERY: I'm going to ask the  
17 Commission to take official notice of Exhibits 64 and  
18 65. Sixty-four is the -- actually, I think 64 is the  
19 joint filing and 65 is the order. Is that not what I  
20 told you, Judge?

21 JUDGE PRIDGIN: Correct.

22 MR. LOWERY: Sixty-four is a joint filing  
23 made in Ameren Missouri's 2014 IRP, actually the  
24 docket is E0-2015-0084 that lists all of the  
25 deficiencies and concerns that the parties agreed were

1 raised in that case. And 65 is the Commission's order  
2 resolving those deficiencies. And I'm entering  
3 those -- or asking you to take official notice of  
4 those documents and of the fact that those documents  
5 reflect that there were no deficiencies or concerns  
6 raised by any party in that case with respect to the  
7 wind, capital cost, wind capacity factors, the  
8 parameters for wind generation that was used by Ameren  
9 Missouri in its IRP. And ask the Commission to take  
10 notice of that.

11 JUDGE PRIDGIN: Any objections?

12 MS. HERNANDEZ: Can I just ask for  
13 clarification? Are you asking just for the judicial  
14 notice that that document itself or the entire case?

15 MR. LOWERY: No, just of these two  
16 documents.

17 MS. HERNANDEZ: I would ask that the  
18 Commission just take judicial notice of the entire  
19 case for context.

20 JUDGE PRIDGIN: Any objections to that?

21 MR. LOWERY: I don't think the entire  
22 case is relevant, so I guess I do object on relevance.  
23 We're talking about, here, the issue of wind versus  
24 solar and the validity of the wind estimates that were  
25 used.

1 JUDGE PRIDGIN: I'll certainly take  
2 administrative notice of that entire docket, and  
3 you're welcome just to refer to Exhibit 64 and 65 if  
4 you'd like, Your Honor.

5 MR. LOWERY: Thank you, Your Honor.

6 JUDGE PRIDGIN: Thank you.

7 BY MR. LOWERY:

8 Q Now, Mr. Powers, do you have this  
9 Chapter 6 from Ameren Missouri's IRP that I handed  
10 you?

11 A. I do.

12 Q. And just so you can follow along, it's  
13 been marked as Exhibit 63. If you could take a look  
14 at page 27 of Exhibit 63?

15 A. I am there.

16 Q. And I'll admit it's a little hard to  
17 read, but if you look up there in the middle of the  
18 map for Missouri, do you see that?

19 A. I see the map for Missouri.

20 Q. There's an area 13 within that -- it's  
21 not exactly a rectangle, but it's a box -- kind of a  
22 box up there. Do you see that?

23 A. I do.

24 Q. And would you agree that roughly equates  
25 to Missouri Zone C that MISO identified that we talked

1 **about a little bit earlier?**

2 A. Yes.

3 Q. Now, take a look at the next page of  
4 Exhibit 63. And you did -- you did look at a number  
5 of portions of Ameren Missouri's Integrated Resource  
6 Plan report in preparing your testimony and you, in  
7 fact, include some of those as schedules, do you not?

8 A. I do.

9 Q. You see on page 28 of Exhibit 63 that  
10 Ameren Missouri is setting out the capital costs for  
11 wind, the capacity factors, levelized cost of energy  
12 for various locations that it used in its integrated  
13 resource plan. Do you see that?

14 A. I do.

15 Q. And you see area 13 in both Table 6.16  
16 and 6.17?

17 A. I do.

18 Q. And in 6.16 they're looking at what it  
19 would cost on a capital cost basis to install wind  
20 using an 80-meter tower, and in Table 6.17 they're  
21 looking at the same thing using 100-meter towers.  
22 Right?

23 A. Correct.

24 Q. And the capital cost at 80 meters in  
25 2014, as used in the IRP, was \$2,032 per KW. Right?

1 A. Correct.

2 Q. And the assumed capacity factor was  
3 30.9 percent. Right?

4 A. Correct.

5 Q. And if we used a hundred foot tower --  
6 excuse me, hundred meter towers were used, the assumed  
7 capital cost in 2014 was 2377 per KW, with a capacity  
8 factor of 37.5. Right?

9 A. That is correct.

10 Q. And as we talked about before, MISO is  
11 assuming a 33 percent capacity factor using 80-meter  
12 towers. Correct?

13 A. I'm not clear that MISO is explicit on  
14 what tower height they're using.

15 Q. Well, I'm going to ask you to assume that  
16 MISO used 33 percent, and we'll ask Mr. Smith to  
17 confirm that when he takes the stand tomorrow, okay,  
18 for purposes of my questions?

19 A. I was talking about the tower height.

20 Q. I'm sorry. I'm going to assume -- let me  
21 rephrase my question. I want you to assume that MISO  
22 used 80-meter towers and at 80 meters they assumed  
23 33 percent, and we'll ask Mr. Smith to confirm  
24 tomorrow. Okay?

25 A. Very good.

1 Q. Now, I talked about earlier some  
2 calculations where we could figure out the --  
3 essentially, we could figure out the per -- the per  
4 percent of capacity cost -- capital cost of a  
5 resource. And what we could do is, for example, we  
6 could take that 2,032 that was assumed by Ameren  
7 Missouri for 80-meter tower heights and we could  
8 divide it by the capacity factor, and we could get --  
9 and I'm going to do that. I'm going to ask you to  
10 confirm the calculation. So I take 2,032 and I divide  
11 by 31. I rounded up the 30.9. You following me?

12 A. I do.

13 Q. I get 6,554, do I not?

14 A. Give me one moment.

15 Q. Sure.

16 A. That is correct.

17 Q. And if I look at the hundred-meter towers  
18 and I look at capital costs of 2,377 and I divide that  
19 by the capacity factor that was assumed -- and I'm  
20 actually making it simple. I'm going to round down  
21 from 37.5 to 37 percent. I get 6,424, do I not?

22 A. Yes.

23 Q. Now, the source that you rely on for --  
24 primarily rely on for your solar capital cost numbers,  
25 your PE-28, it indicates that using the midpoint of



1 **the analyst range -- ranges that are reported there,**  
2 **that solar capital costs in 2016 is projected to be**  
3 **about \$1,625 per KW. Right?**

4 A. Could you point me where on this graphic?  
5 This is the bottom bullet on that page?

6 **Q. I'm on slide 27.**

7 MR. LOWERY: And for the Commissioners,  
8 I'm in Exhibit 62.

9 BY MR. LOWERY:

10 **Q. This is -- your PE-28 is -- also has**  
11 **slide 27, does it not?**

12 A. Correct.

13 **Q. If I look at utility scale systems on**  
14 **this page, I get between 1.3 and 195 per watt. That**  
15 **equates to -- the midpoint of that, per KW basis, is**  
16 **1625, is it not?**

17 A. Correct.

18 **Q. Now, the numbers I was talking about wind**  
19 **a moment ago were AC, alternating current numbers.**  
20 **Right?**

21 A. Correct.

22 **Q. And the numbers we're talking about here**  
23 **on Exhibit 62 are expressed in DC. Correct?**

24 A. That is correct.

25 **Q. And if I -- to figure out what a DC**

1 **figure equates to in alternating current, I've got to**  
2 **convert that DC to AC, do I not, to put them on an**  
3 **equal basis?**

4 A. Correct.

5 Q. **And you used a conversion factor of .9 to**  
6 **do that in your testimony. Correct?**

7 A. Yes.

8 Q. **And you took that .9 from your PE-29,**  
9 **which was a report from -- I don't know if I'm**  
10 **pronouncing it right, but an entity called KEMA?**

11 A. Correct.

12 Q. **And in particular, I think you must have**  
13 **been looking at page 16 of Exhibit PE-29?**

14 A. Correct.

15 Q. **And there's this assumption of DC/AC**  
16 **conversion of .9. Right? That's where you got that?**

17 A. Correct.

18 Q. **Now, the KEMA report indicates -- and I**  
19 **quote, over in the comments, In general, the more**  
20 **generous assumption of .9 conversion is probably**  
21 **justified for best case contemporary utility scale**  
22 **systems. Do you see that?**

23 A. I do.

24 Q. **Below, several lines down, KEMA also**  
25 **observes that the one large unknown in this discussion**

1 is temperature, and they go on to say, If the  
2 temperature is intended to be included in this DC/AC  
3 conversion, then .9 is not likely to be obtained. Do  
4 you see that?

5 A. I do.

6 Q. You would agree that the .9 is a best  
7 case scenario, right, for utility scale solar  
8 according to KEMA?

9 A. According to KEMA, yes.

10 Q. Now, if I use your .9 conversion  
11 factor -- and I'm going to round the 1,625 midpoint  
12 down to 1,600, just for convenience. If I use your  
13 .9 conversion factor and I assume a 1,600 per kilowatt  
14 DC capital cost for solar, that actually equates to  
15 1,777 per KW on an AC basis, does it not?

16 A. Give me one minute.

17 That is correct.

18 Q. And if I have you were to use a .85  
19 factor instead of -- just so we can make sure we  
20 understand how the math works, and that same \$1,600  
21 per KW DC capital cost, that would equate to 1,882 on  
22 an AC basis. Correct?

23 A. That is correct.

24 Q. So let's take the 1,777 AC solar capital  
25 cost number that you would point to from the Sunshot

1 report and take the 2,032 and the 2,377 wind numbers  
2 that come from Ameren Missouri's 2014 IRP. Are you  
3 with me?

4 A. I think so.

5 Q. And those wind numbers are from 2014 and  
6 this \$1,600 number is an analyst projection for 2016  
7 for solar; is that right?

8 A. Correct.

9 Q. So if I take the 1,777 per KW AC  
10 projection for the solar in 2016 and I assume a  
11 20 percent capacity factor for the solar -- and again,  
12 I'm assuming a mix of -- equal mix of fixed and  
13 tracking solar across Missouri, then I would come up  
14 with a figure of 8,885, would I not?

15 A. Correct.

16 Q. And as we discussed a minute ago, the  
17 corollary figures for using the 2014 wind capital cost  
18 and the capacity factors we talked about for wind were  
19 6,554 and 6,424, depending on which tower height we  
20 were using and which capital cost. Do you recall  
21 that?

22 A. I do.

23 Q. So if I take the 80-meter figure from  
24 Ameren Missouri's IRP and I get my 6,554, and I take  
25 the 1,777 per kilowatt AC projection for solar using a

1 20 percent capacity factor, and I figure out the  
2 percentage difference between the two, the solar is  
3 about 35 percent higher than the wind, using those  
4 parameters, is it not? You would take 8,885 divided  
5 by 6,554 to get that, would you not?

6 A. That sounds about right.

7 Q. And if we did the same thing and we used  
8 the 1,777 AC for solar and we used the 2,377 capital  
9 cost for wind at 100 meters and the higher capacity  
10 factor for wind at 100 meters, the wind is about  
11 38 percent cheaper in that comparison, is it not?

12 A. That also sounds about right.

13 Q. Would you agree that, for a solar  
14 facility with a 20 percent capacity factor or a mixed  
15 solar facilities that together have a 20 percent  
16 capacity factor with a DC to AC conversion of .9 and  
17 using the 2014 IRP capital cost and capacity factors  
18 for wind at 80 meters, that the solar facilities  
19 capital cost would have to be \$1,311 per watt AC to  
20 equal the wind capital cost?

21 A. I won't spend the time to run that number  
22 on the calculator. I presume that you did that  
23 properly. But yes, for this hypothetical exercise  
24 with those numbers, that sounds about right.

25 Q. Take a look at your Rebuttal Testimony at

1 page 37. And I just want the record to be clear.  
2 You're not taking the time to verify the calculations,  
3 but you're not disputing the accuracy of those  
4 calculations; is that right?

5 A. That's correct.

6 Q. Now, if we look at page 37 of your  
7 testimony, we see a table at the top, do we not?

8 A. Correct.

9 Q. And that 1,311 AC figure I just quoted  
10 for utility scale solar, it's below even the lowest of  
11 the range that you have in that last column, 2016  
12 Forecast in KW AC with DC to AC conversion, is it not?

13 A. It's about 5 to 10 percent lower, that's  
14 correct.

15 Q. A hundred thirty-three bucks, I think,  
16 right, per KW?

17 A. Correct.

18 Q. And just so the record's clear, if we  
19 were to do the same calculation, use the same solar  
20 parameters, 1,777 AC, 20 percent capacity factor for  
21 the solar, but we used the 100-meter tower information  
22 from Ameren Missouri's 2014 IRP, the solar would have  
23 to be \$1,285 per watt AC to equate to that wind  
24 generation, would it not?

25 A. That sounds about right for your

1 hypothetical calculation for 2016.

2 Q. Well, in fact, the solar numbers that you  
3 were using are projections in 2016, but the wind  
4 numbers that I'm using are from a couple of years  
5 earlier, are they not?

6 A. Correct.

7 Q. Now, taking a look at Exhibit 63, which  
8 is the -- or excuse me, Exhibit 62, which is the full  
9 Sunshot report, of which you included just a couple of  
10 pages, that report includes actual utility scale solar  
11 PV installation costs through 2013 on slide 14, does  
12 it not?

13 A. It does.

14 Q. Would you agree that those actual  
15 reported costs in DC are about 2600 to 3200 per KW DC?

16 A. In what year?

17 Q. Well, it's -- it's through 2013 -- the  
18 2013 numbers. I apologize. If you look at the third  
19 bullet down below, it actually tells us that doesn't  
20 it, that the majority of the system fell in that  
21 range?

22 A. Right. They see a low end of about  
23 \$1.50, but that is the -- I guess the mid range.

24 Q. Well, what the bullet says is that the  
25 majority of 2013 systems -- and it's talking about

1 **utility scale in this slide, is it not?**

2 A. Correct. But I'm looking at the figures,  
3 and I can see that the --

4 Q. **Sure.**

5 A. -- best in class was about \$1.50 a watt.

6 Q. **Understand. But the majority of the**  
7 **systems that are being reported here installed in**  
8 **2013, utility scale systems, ranged roughly from 260 a**  
9 **watt to 320 a watt, which equates to \$2,600 a KW to**  
10 **3,200 KW. Is that not right?**

11 A. Correct. That is what the bullet says.

12 Q. **And if I was going to use your .9**  
13 **conversion rate and put that on an apples-to-apples AC**  
14 **basis, I would get 2,889 to 3,555. Does that sound**  
15 **right?**

16 A. That does sound about right.

17 Q. **And the data on slide 14 of Exhibit 62,**  
18 **that's U.S. data, would you agree?**

19 A. Yes.

20 Q. **Now, what you focused on in your**  
21 **testimony from this presentation was slide 27. And**  
22 **slide 27 are analyst estimates of global average**  
23 **system prices, are they not?**

24 A. That is correct.

25 Q. **Isn't it true that installed costs**



1 **outside the U.S. are often lower than installed costs**  
2 **in the U.S? For example, in Germany costs tend to be**  
3 **quite a bit lower?**

4 MS. HERNANDEZ: Objection, calls for  
5 speculation.

6 JUDGE PRIDGIN: I'll overrule. He can  
7 answer if he knows, and if he doesn't, he can say so.

8 THE WITNESS: The solar systems installed  
9 in Germany are primarily not what we consider utility  
10 scale, but they do have lower commercial and  
11 residential installation costs than our systems do.

12 BY MR. LOWERY:

13 **Q. Well, let me ask you just the general**  
14 **question, if you know. As a general proposition, are**  
15 **utility scale systems installed outside the U.S., in**  
16 **general, installed at a lower cost than utility scale**  
17 **systems in the U.S.?**

18 A. I just -- I don't know.

19 **Q. You don't know. That's fine.**

20 A. U.S. is the primary installer of utility  
21 scale solar systems.

22 **Q. Now, your pre-filed testimony, your**  
23 **Rebuttal Testimony at page 3, line 6 to 7, indicates**  
24 **that informing the opinions that are reflected in that**  
25 **testimony, particularly relating to wind versus solar**

1 **costs, you evaluated various things. You evaluated**  
2 **DOE evaluation of current and near-term solar costs.**

3 **Right?**

4 A. Can you direct me again to the page and  
5 line --

6 **Q. You bet.**

7 A. -- you're at?

8 **Q. Page 3.**

9 A. I'm there.

10 **Q. On line 6, you evaluated U.S. DOE**  
11 **evaluation of current and near-term solar costs.**

12 **Right?**

13 A. Correct.

14 **Q. You evaluated DOE evaluation of near-term**  
15 **wind power additions. Right?**

16 A. Correct.

17 **Q. You've attached, as a portion of a**  
18 **schedule or one of your schedules, I think it's PE-27,**  
19 **is also from the -- a document from the Energy and**  
20 **Information Administration, is it not?**

21 A. I do have an exhibit from Energy  
22 Information Administration, but you're moving very  
23 fast through these exhibits, so give me a moment to --

24 **Q. Sure. Sure. I apologize.**

25 A. Go ahead.

1           **Q.     So you also relied on U.S. EIA**  
2 **information, did you not?**

3           A.     I did.

4           **Q.     And EIA is a -- I don't know if it's**  
5 **right to call it a division, but it's part of the**  
6 **Department of Energy, is it not?**

7           A.     That is correct.

8           **Q.     Now, PE-25 is a -- I think it's just a**  
9 **portion of a DOE wind technology report from 2014, is**  
10 **it not?**

11          A.     Give me just a second. PE-25?

12          **Q.     Correct.**

13          A.     2014 wind technology's market report.

14          **Q.     Right.**

15          A.     Yes.

16          **Q.     And you included a portion of that**  
17 **report, but it's a much larger report, is that right?**

18          A.     That is correct.

19                 MR. LOWERY: I need to get another  
20 exhibit marked, Your Honor, please. Be number 66.

21                 JUDGE PRIDGIN: Correct, number 66.

22                 (ATXI Exhibit 66 was marked for  
23 identification.)

24                 BY MR. LOWERY:

25                 **Q     Would you confirm for me that Exhibit 66**

1 **that I just handed you is the full report that you**  
2 **attached a portion of to your testimony?**

3 A. It does appear to be the full report.

4 Q. **In fact, we asked you for this and you**  
5 **provided it, did you not?**

6 A. Correct.

7 Q. **Now, if you'll look at page 2 of this**  
8 **report -- and I think I'm talking about not the Roman**  
9 **numeral but the real two,**

10 A. One more time. Roman numeral or --

11 Q. **No, it's not the Roman numeral. I**  
12 **apologize. Just page 2.**

13 A. I'm there.

14 Q. **Do you see in that -- I guess it's the**  
15 **only full paragraph that, Some sources relied upon for**  
16 **this report were Lawrence Berkeley National Lab,**  
17 **American Wind Energy Association, the AEIA we just**  
18 **talked about. Do you see that?**

19 A. I do.

20 Q. **And your Schedule 28, the Sunshot**  
21 **presentation, it also relies in part on information**  
22 **from Lawrence Berkeley National Lab, does it not?**

23 A. That is correct.

24 Q. **And I'm going to use the acronym LBNL to**  
25 **shorten it up a little bit. Is that okay?**

1 A. That is fine.

2 Q. I asked you a question a while ago about  
3 the sole source of your information for the statement  
4 that you made that wind costs are assumed to go up in  
5 the future, and I think you confirmed that that was in  
6 PE-27, did you not?

7 A. I'm going to have to check --

8 Q. Sure.

9 A. -- and see.

10 Q. And I apologize for being a little  
11 disjointed here.

12 A. That's all right. It would help if you  
13 give me -- given I've got 40 exhibits, if you can give  
14 me the title of the exhibit, then I can get right to  
15 it.

16 Q. Sure. The title exhibit, Mr. Powers, is  
17 Assumptions to the Annual Energy Outlook.

18 A. Okay.

19 Q. Mr. Powers, I don't know if this would  
20 help. I probably should have given this to begin  
21 with, but I've got copies of your testimonies that  
22 have tabs for each of your schedules. Would that be  
23 helpful to you?

24 A. Well, unfortunately, the --

25 Q. You've marked them? Okay.

1           A.     -- the printer cut off all of the exhibit  
2 numbers on the schedules on my copies here, so this  
3 helps a lot.

4           **Q.     Okay. And I don't mean to interrupt**  
5 **you --**

6           A.     I am there.

7           **Q.     -- but I'm looking at PE-27. Right?**

8           A.     Correct.

9           **Q.     And that's the source of your contention**  
10 **that wind costs are assumed to go up in the future.**  
11 **Right? It's at the top of that second page of that**  
12 **exhibit, is it not?**

13          A.     That is correct.

14          **Q.     Now, let's go back to what's been marked**  
15 **as Exhibit 66, and that's this wind technology report,**  
16 **the full one, not the excerpt you have.**

17          A.     I have it.

18          **Q.     Could you turn to page 47 of that report,**  
19 **please?**

20          A.     I am there.

21          **Q.     Would you agree that at the top of that**  
22 **page is a chart from LBNL reporting wind turbine**  
23 **transaction prices up through January of 2015?**

24          A.     Yes.

25          **Q.     And it shows a declining trend since**

1 **about 2009 or so; is that right?**

2 A. Right. Still above ten years ago, but it  
3 is below 2009.

4 **Q. And the trend is down. Correct?**

5 A. That is correct.

6 **Q. And the second full paragraph on that**  
7 **page reports a 20 to 40 percent drop since late 2008,**  
8 **does it not?**

9 A. Correct.

10 **Q. And the last sentence of that paragraph**  
11 **indicates, quote, These price reductions and improved**  
12 **terms have exerted downward pressure on total project**  
13 **cost and wind powers, comma, whereas increased rotor**  
14 **diameters and hub heights are improving capacity**  
15 **factors and further reducing wind powers -- wind power**  
16 **prices.**

17 **Did I read that right?**

18 A. That's what it says.

19 **Q. And then the bold line below what I just**  
20 **read indicates that lower turbine prices have driven**  
21 **reductions in reported installed project costs.**  
22 **Correct?**

23 A. In the context of lower historic prices  
24 than these prices.

25 **Q. Okay. Now, you use essentially one chart**

1 **from Exhibit 66, and that's on page 72 of this report;**  
2 **is that right?**

3 A. That is correct.

4 Q. **And you cite to that chart on page 72 for**  
5 **the proposition in your Rebuttal Testimony that the**  
6 **growth prospects for wind are, quote, not good, do you**  
7 **not?**

8 A. That is correct.

9 Q. **Would you agree that this chart was**  
10 **prepared before Congress extended the production tax**  
11 **credit for wind, which it just did last month?**

12 A. Yes. It extended the credit for wind and  
13 solar.

14 Q. **For both. And so for wind, that**  
15 **production tax credit has been extended to apply to**  
16 **wind projects that are actually started by the end of**  
17 **2019; isn't that correct?**

18 A. 2019 or 2014?

19 Q. **I'm talking about the extension that took**  
20 **place last month. Are you familiar with that?**

21 A. Oh, I thought you were reading from this  
22 text. Yes, I am familiar with it. That is correct.

23 Q. **Now, you characterize Figure 53, which is**  
24 **on page 7-- Figure 53, which is on page 72 of this DOE**  
25 **wind technology report, you characterize that as a,**



1 quote, DOE projection for U.S. wind power growth 2015  
2 to 2020. That's how you label it in your testimony;  
3 is that right?

4 A. Correct.

5 Q. Now, doesn't the report simply say -- it  
6 says that, Among the forecasts presented in the  
7 chart -- and then it identifies the chart as the  
8 source of forecasts?

9 A. Yes. I could have added the word report,  
10 DOE report to make that clear, that is correct.

11 Q. And I guess my point -- I don't mean to  
12 quibble with you, but not all of the forecasts that  
13 are in this chart are from DOE. In fact, there are  
14 two that are arguably are from DOE. One is the DOE  
15 line labeled Wind Vision and the other one is from  
16 EIA; isn't that fair? The other ones are not actually  
17 from DOE; isn't that right?

18 A. That is correct.

19 Q. And the EIA forecast that's in this  
20 chart, it only goes out to 2016; is that right?

21 A. Correct.

22 Q. And the Wind Vision forecast -- the DOE  
23 Wind Vision forecast is out through 2020. Right?

24 A. Correct.

25 Q. The data underlying this chart actually

1 came from DOE's Wind Vision project, didn't it? And  
2 you can see that if you look at the next page, page  
3 73. And that last full paragraph.

4 A. Yes.

5 Q. Now, you said you weren't -- you weren't  
6 aware there was a DOE Wind Vision project before I  
7 mentioned it today?

8 A. That is correct.

9 Q. All right.

10 A. But to be clear, I'm aware that DOE is  
11 putting out numerous reports on wind costs. I wasn't  
12 aware they called it Wind Vision.

13 Q. All right.

14 MR. LOWERY: Your Honor, would this be  
15 67?

16 JUDGE PRIDGIN: Yes, sir.

17 (ATXI Exhibit 67 was marked for  
18 identification.)

19 BY MR. LOWERY:

20 Q Would you like for me to wait a moment,  
21 Your Honor?

22 JUDGE PRIDGIN: I'm sorry. Whenever  
23 you're ready, sir.

24 MR. LOWERY: Thank you.

25 BY MR. LOWERY:

1           **Q. Mr. Powers, I've handed you what's been**  
2 **marked as Exhibit 67. And I know you said that you**  
3 **had not seen or I guess you weren't aware of this**  
4 **particular report, although you did know that DOE was**  
5 **putting out reports on wind costs and wind potential.**  
6 **Is that fair to say?**

7           A. That is fair.

8           MR. LOWERY: Now I'm going to state for  
9 the record and, Your Honor, if -- if need be, I  
10 suppose we can, instead of killing as many trees as  
11 I've already killed, we can put the full 348-page  
12 report and the entire 259-page appendix in, but I have  
13 only included portions of the report and appendices  
14 because I was truly trying to save some paper.

15 BY MR. LOWERY:

16           **Q. Mr. Powers, would you take a look at**  
17 **this. If you need to take a moment, that's certainly**  
18 **fine. And verify that this is a report issued by the**  
19 **U.S. Department of Energy called Wind Vision?**

20           A. I verify that.

21           **Q. And as we talked about a moment ago, that**  
22 **report that you relied upon, the wind technologies**  
23 **report, actually points to this and points to it as a**  
24 **2015 report, does it not?**

25           A. Correct.

1 Q. So you understand now that DOE has put  
2 out a report, including appendices, on wind power  
3 prospects in the United States and that report was put  
4 out in 2015; is that true?

5 A. That is correct.

6 Q. Now, you can see -- and take a moment  
7 because I know you haven't seen this before, that I  
8 included the cover of the report, the table of  
9 contents, and I included the entire report through  
10 Chapter 1, and then I included Appendices G and H in  
11 the report. And to just help you find that, if you  
12 go -- I probably should have broken these up, but take  
13 a moment and locate where the appendices start.

14 A. Okay, I have appendices G, H and N.

15 Q. And N. That's right. I apologize. I  
16 forgot I included N as well.

17 A. I have located the appendices.

18 Q. Now, take a look at page **iiix** -- **iiivi**,  
19 lower case, of executive summary of this report.

20 A. Can you repeat that Roman numeral again?

21 Q. **iii** -- excuse me. **xxxvi**. I don't know  
22 my Roman numerals very well, so --

23 A. Okay. I am at **xxxvi**.

24 Q. I apologize. I may be looking at the  
25 wrong -- wrong page. Bear with me just a second. I

1 apologize. Okay. Do you see that chart at the bottom  
2 of that page?

3 A. Figure ES 2-3?

4 Q. Correct.

5 A. Yes.

6 Q. Would you agree that at least up -- up  
7 through 2013, that it's depicting the same data that  
8 is on the chart on page -- I believe it's 72, of the  
9 wind technologies report that you included?

10 A. Yes.

11 Q. Take a look at Chapter 1 of Exhibit 67,  
12 this Wind Vision report. And in particular, take a  
13 look at page 16 of Chapter 1.

14 A. I am there.

15 Q. If you take a look, there -- what page 16  
16 has is a list of references for Chapter 1; is that  
17 right?

18 A. Correct.

19 Q. Do you see 12, 13 and 16 over in that  
20 second column?

21 A. Twelve, 13 and 16?

22 Q. Correct.

23 A. Yes.

24 Q. You see that 12 lists R. Riser [sic]. Do  
25 you recognize Mr. Riser [sic] as being from LBNL and

1 **being one of the contributors to the Sunshot**  
2 **presentation that you included a portion of?**

3 A. Yes. He's the author of this November  
4 2007 citation.

5 Q. **And you see Bloomberg New Energy Finance**  
6 **in reference number 13 and Bloomberg is one of the**  
7 **analysts that's had given projections -- analyst**  
8 **projections on the slide in your PE-28? Do you**  
9 **remember that?**

10 A. Correct.

11 Q. **And you see reference number 16 and**  
12 **that's Navigant Consulting?**

13 A. That is correct.

14 Q. **And Navigant was one of the sources in**  
15 **the wind technologies DOE report, the chart that you**  
16 **included in your schedule? Do you remember that?**

17 A. I do.

18 Q. **Take a look at Appendix N of Exhibit 67.**

19 A. I am there.

20 Q. **Appendix N is a pretty long listing of**  
21 **the contributors to this Wind Vision report; is that**  
22 **fair?**

23 A. That is fair.

24 Q. **If you go to page 225, we see**  
25 **Mr. Riser's -- Mr. Wiser's name, again, in connection**

1 **with wind power technology costs and performance**  
2 **assumptions in appendix H, do we not?**

3 A. What page is that?

4 Q. **Page 225.**

5 A. Yes.

6 Q. **Go to page 227. We see a representative**  
7 **from NREL, the National Renewable Energy Laboratory,**  
8 **and Mr. Riser ag-- Wiser again, do we not?**

9 A. Yes.

10 Q. **You rely on NREL data, do you not?**

11 A. I did rely, in my Rebuttal Testimony, on  
12 the photovoltaic pricing trends that was put out by  
13 Ron Berkeley and NREL, yes.

14 Q. **Would you agree that Appendix G of this**  
15 **report contains non-wind inputs and assumptions that**  
16 **were used for the report?**

17 A. I haven't read it, but it's titled  
18 Regional Energy Deployment System Model Additional  
19 Inputs and Assumptions.

20 Q. **And you're familiar with that model, are**  
21 **you not, DOE's use of that model?**

22 A. I've heard of it.

23 Q. **You've seen it referenced in a number of**  
24 **DOE reports, have you not?**

25 A. No.

1 Q. But you've heard of it?

2 A. I have now.

3 Q. Would you agree that Exhibit H has the  
4 wind inputs and assumptions used in this report  
5 Appendix H? I think I might have said exhibit.

6 A. Appendix H is wind power technology costs  
7 and performance assumptions.

8 Q. And it's common for reports such as this  
9 to have appendices that reflect the detailed  
10 assumptions that were used for the report, is it not?

11 A. That is correct.

12 Q. Please take a look at page xxiii of the  
13 executive summary.

14 A. I am there.

15 Q. Could you read the first sentence under  
16 items one to four on that first column on that page?

17 A. Could you repeat that request?

18 Q. Could you, please, read the first  
19 sentence appearing under items -- numbered items one  
20 to four in the first column on that page?

21 A. So read each one? There's only one  
22 sentence in each of these bullets.

23 Q. I'm -- I'm clearly asking you a bad  
24 question. The sentence starting the conclusions of  
25 this collaborative effort right underneath those



1 **bullets.**

2 A. The conclusions of this collaborative  
3 effort summarized below demonstrate the important role  
4 that wind power has in the U.S. power sector and  
5 highlight its potential to continue to provide clean,  
6 reliable and affordable electricity to consumers for  
7 decades to come.

8 **Q. And then a little ways below that in sort**  
9 **of a larger and colored font, the report says, quote,**  
10 **A high U.S. wind penetration future is achievable,**  
11 **affordable and beneficial.**

12 **Is that what the report says?**

13 A. That is what it says.

14 **Q. Do you see the Study Summary section over**  
15 **in the second column, down toward the bottom of the**  
16 **page in the report?**

17 A. Could you repeat that?

18 **Q. Second column of that same page under the**  
19 **heading Study Summary -- do you see Study Summary?**

20 A. Yes.

21 **Q. Do you see that next-to-last sentence**  
22 **where the report indicates, quote, the Wind Vision**  
23 **report updates and expands upon the DOE's 2008 report**  
24 **20 percent wind energy by 2030 through an analysis of**  
25 **scenarios of wind power supplying 10 percent of**

1 national end-use electricity demand by 2020,  
2 20 percent by 2030, and 35 percent by 2050.

3 Do you see that?

4 A. I do.

5 Q. Do you know what the wind penetration in  
6 the U.S. is, roughly, as of the current time?

7 A. It is a few percent.

8 Q. In fact, if we look at page xxx of this  
9 executive summary, I think it's going to tell us. Are  
10 you there?

11 A. I am.

12 Q. Does about 4.5 percent as of the end of  
13 2013 sound about right?

14 A. It does.

15 Q. Could you turn to page xxxviii of the  
16 executive summary?

17 A. I am there.

18 Q. Do you see that chart that is -- well,  
19 let me just ask you. I'm sure you see the chart.

20 Is it fair to say that the chart is  
21 reporting the utilization and expected utilization of  
22 wind powers at given heights in the past -- the height  
23 of those wind towers in the past and in the present  
24 and in the future?

25 A. You're talking about Figure 2-5?

1           **Q.     Yes, I am.**

2           A.     It's showing installed costs, the orange  
3 curve and then it has as a back drop larger and larger  
4 wind turbines and just showing larger turbines out in  
5 the future.

6           **Q.     And in terms of the larger -- well,  
7 larger turbines. It's actually larger tower heights.  
8 Right? I don't know. Maybe it's showing larger  
9 turbines as well.**

10          A.     Both.

11          **Q.     Both. In terms of the tower heights and  
12 turbine sizes in 2005-2010 time frame, it's indicating  
13 that we would expect to have seen 80-meter tower  
14 heights. Right?**

15          A.     That is correct.

16          **Q.     And currently we would expect to see  
17 hundred-meter tower heights. Right?**

18          A.     That is correct. But that's not what the  
19 earlier report you handed me states.

20          **Q.     I understand. That's what this report  
21 states though, doesn't it?**

22          A.     Right.

23          **Q.     From DOE from 2015. Right?**

24          A.     They're both DOE reports.

25          **Q.     And the expectation, according to this**

1 **report, is that tower heights are going to get taller**  
2 **as we move through time. Correct?**

3 A. That is -- I mean, it's kind of an  
4 aspirational graphic. I haven't read to see if we're  
5 going to get to 125 or 150 meters, but the earlier DOE  
6 report says 80-meter height is what people are putting  
7 in primarily. I shouldn't say people. Wind  
8 developers.

9 **Q. Now, your schedule PE-08 -- and I'll let**  
10 **you get there.**

11 A. I am there.

12 **Q. PE-08 is also an excerpt, I guess it's**  
13 **really a cover page and one page from a somewhat**  
14 **larger document, is it not?**

15 A. Correct.

16 **Q. Need to get an exhibit marked, please,**  
17 **Your Honor.**

18 JUDGE PRIDGIN: This will be 68.

19 (ATXI Exhibit 68 was marked for  
20 identification.)

21 BY MR. LOWERY:

22 **Q Mr. Powers, do you recognize Exhibit 68**  
23 **as being the entire document that -- an excerpt of**  
24 **which you a patched as PE-08 to your Rebuttal?**

25 A. I do.

1 Q. Now, if you look at Exhibit 68, you can  
2 see that almost all the wind generation installed in  
3 northwest Missouri that you had referred to and that  
4 is primarily taken by Missouri co-ops, but some of it  
5 is taken by Mid-American in Iowa, was installed in  
6 2010 or before. Correct?

7 A. Correct.

8 Q. You told me before that you aren't  
9 familiar with the characteristics of the generation  
10 that makes up the 458 megawatts that are located in  
11 northwest Missouri. Correct?

12 A. In terms of turbine megawatt --

13 Q. Tower heights, rotor blade lengths,  
14 generator efficiency --

15 A. That's correct.

16 Q. -- you don't know about those. Right? I  
17 apologize for speaking over you. That was correct?

18 A. Yes.

19 Q. Might the use of 80-meter towers in  
20 northwest Missouri explain the 28 percent capacity  
21 factor for this generation that you cite in your  
22 testimony that you rely upon when you made your wind  
23 solar cost comparisons?

24 A. Yes. But again, that DOE report I just  
25 mentioned --

1 Q. My simple question was: Might the  
2 80-meter tower height cause or -- or be the reason why  
3 there's only a 28 percent capacity factor for this  
4 northwestern Missouri generation; isn't that right?

5 A. It might.

6 Q. And, in fact, if you look at this report  
7 right above the table and actually included in your  
8 testimony, they're showing wind speeds at 80 meters,  
9 are they not?

10 A. Correct.

11 Q. And if you flip back to the prior page in  
12 Exhibit 68, the third bullet under Missouri's Wind  
13 Energy Potential points to 80 meter towers. Right?

14 A. That is correct.

15 Q. And as we talked about, Union Electric's  
16 IRP had cost and performance data for 100-meter towers  
17 and 80-meter towers, did it not?

18 A. It did.

19 Q. I want to go back to -- I apologize, but  
20 I want to go back to Exhibit 67. That's the Wind  
21 Vision report and, in particular, I want to go back to  
22 the appendices. And more specifically, I'd like to  
23 direct you to G.2.2, Section G.2.2 in that appendix.  
24 And that's on page 39 and 40, carries on beyond  
25 that --

1 A. I am there.

2 Q. -- of that appendix. G.2.2 is entitled  
3 Solar Technologies. Correct?

4 A. Yes.

5 Q. And if you flip to the next page, page  
6 40, you see technology cost assumptions for utility  
7 scale photovoltaics, PV. Right?

8 A. Yes.

9 Q. And you see -- across that top line you  
10 see capital cost numbers for -- in dollars per  
11 kilowatt DC and that's what -- when we were using --  
12 we were talking about dollars per kilowatt DC before.  
13 Right?

14 A. Correct.

15 Q. And then we were converting them to AC.  
16 Correct?

17 A. Correct.

18 Q. So you see numbers 2015, 2368; 2020,  
19 1604; 2025, 1470 and so on. Right?

20 A. Correct.

21 Q. These are the assumptions that underlie  
22 this Wind Vision report for solar capital costs; is  
23 that fair?

24 A. That is correct.

25 Q. Then go to Appendix H of Exhibit 67. And

1 **that's just a couple pages later where it begins.**

2 A. I am there.

3 Q. **And you see that Appendix H is titled**  
4 **Wind Vision Wind Power Technology Cost And Performance**  
5 **assumptions. Do you see that?**

6 A. I do.

7 Q. **And if you turn to the next page, DOE**  
8 **looked at the wind with a greater level of granularity**  
9 **if you see -- look in Table H-4, this is land-based**  
10 **wind, on-shore wind. Right?**

11 A. Correct.

12 Q. **And we've been talking about on-shore**  
13 **wind today, have we not?**

14 A. I have.

15 Q. **Well, I think I have too.**

16 A. Good.

17 Q. **If you look in 2020 -- there's a column**  
18 **for 2020, and if you scan through that, I believe**  
19 **you'll find that the highest assumed capital cost by**  
20 **DOE in this report for wind is 1758 a KW. Does that**  
21 **look right to you?**

22 A. And we're in Table H-4?

23 Q. **Yes, we are.**

24 A. What was the value that you mentioned?

25 Q. **1758 per KW.**



1 A. What year?

2 Q. 2020.

3 A. That does look correct.

4 Q. **And the lowest capacity factor, I'm going**  
5 **to call that -- I'm going to refer to that as sort of**  
6 **the worst wind that DOE assumed was 32 percent, right,**  
7 **for that same year?**

8 A. Correct.

9 Q. **Now, do you recall -- well, let me back**  
10 **up.**

11 MR. LOWERY: I need to get another  
12 exhibit marked, Your Honor. That's 69.

13 JUDGE PRIDGIN: Yeah, 69.

14 (ATXI Exhibit 69 was marked for  
15 identification.)

16 BY MR. LOWERY:

17 Q. **Do you recognize Exhibit 69, Mr. Powers?**

18 A. I do.

19 Q. **This is the Brattle study that**  
20 **Mr. Michael cited in his testimony. Correct?**

21 A. Correct.

22 Q. **And I'm going to acknowledge up front**  
23 **you're probably not going to agree with me on the**  
24 **solar capital cost projections for 2020 that are in**  
25 **this report and that Mr. Michael cited, but**

1 nonethelless, those projections were made and  
2 Mr. Michael cited to them, did he not?

3 A. That is correct.

4 Q. And if we go to the chart that  
5 Mr. Michels pointed to, and I'm going to point you to  
6 page 22 of Exhibit 69, the Brattle report, what we see  
7 out 2019, 2020, we see a solar capital cost in DC of  
8 about 1500, 1600 per watt -- per kilowatt, I should  
9 say. Right?

10 A. Right. That is what Figure 5 shows.

11 Q. And we already did the math on 1,600  
12 before. Divide by .9 if we use your DC to AC  
13 conversion factor and we get 1,777 AC. Right?

14 A. Correct.

15 Q. Now, I'm going to -- for purposes of  
16 these questions, I'm going to assume a 22 percent  
17 capacity factor for the solar. I'm just going to  
18 assume it's all tracking. Okay?

19 A. Okay.

20 Q. And I'm going to use your .9 percent  
21 conversion factor. Okay? That make sense?

22 A. That's fine.

23 Q. So if we've got -- if Brattle's right --  
24 I know you don't agree they are, but if they are, if  
25 we've got 1,600 per watt DC, we've got capacity factor

1 of 22 percent and we use a .9 conversion factor, we  
2 get 8081. Right? Can you check that for me?

3 A. Let me check. Correct.

4 Q. Now, if we take the Wind Vision -- the  
5 highest cost -- capital cost for wind assumed in the  
6 Wind Vision report, the 1,758 per KW AC, and we take  
7 the lowest capacity factor the Wind Vision reported --  
8 report assumed for wind at 32 percent, we -- we get  
9 5,494, do we not?

10 A. We do. But I do want to point out  
11 Mr. Michael used \$2,400 per KW. That's the witness.

12 Q. Was my 5,494 number correct?

13 A. Could you give me those numbers again?

14 Q. 1,758 for wind. And that's what the Wind  
15 Vision assumption was, the highest cost wind they  
16 assumed was 1,758. And the worst capacity factor that  
17 they assumed was 32 percent. You remember that, do  
18 you not? And if I -- if I divide that 1,758 by 32, I  
19 get 5,494, do I not?

20 A. That is correct.

21 Q. And that's a 2020 assumption in the Wind  
22 Vision report, is it not?

23 A. It is.

24 Q. And we just calculated a 2020 number  
25 based on the Brattle report for solar with a

1 **22 percent capacity factor, did we not, and that was**  
2 **8081.**

3 A. That is correct.

4 **Q. And just to clarify, Mr. Michels used**  
5 **\$2400 for wind, but he was pulling it from a 2014 IRP**  
6 **report, was he not?**

7 A. Mr. Michels is the witness. You are not  
8 the witness.

9 **Q. Did I characterize what he did correctly**  
10 **or not?**

11 A. Could you repeat what you characterized?

12 **Q. When Mr. Michels used 2400, he simply**  
13 **took the 2400 -- actually, it's 2377, but it was**  
14 **rounded to 2400, from the 2014 IRP for a wind cost,**  
15 **did he not?**

16 A. I think that is correct.

17 **Q. And he did not represent or imply that**  
18 **the 2400 was what he expected wind capital costs to be**  
19 **in 2020, did he?**

20 A. His low-cost projections you're using are  
21 flat. They stay at 1700 in 2015, 2020, 2030, 2040.  
22 They are flat projections. They are not declining.

23 **Q. Can you answer my question? Did**  
24 **Mr. Michels imply that the \$2,400 from the 2014 IRP**  
25 **was an expected capital cost in 2020?**

1           A.     I think I would like to review  
2 Mr. Michels' testimony if we're going to go into the  
3 details.

4           MR. LOWERY: Your Honor, if -- may I  
5 approach and share this with the witness because it's  
6 the only copy I think I have with me right now.

7           JUDGE PRIDGIN: You may.

8           MS. HERNANDEZ: What page are you  
9 sharing?

10          MR. LOWERY: Bear with me just a second  
11 and I'll let you know.

12 BY MR. LOWERY:

13          **Q     Mr. Powers, I'm showing you Mr. Michels'**  
14 **testimony. Ask you, first, if you recognize that**  
15 **testimony and if you've reviewed it? I'm sure you**  
16 **have.**

17          A.     I do recognize it and I have reviewed it.

18          **Q.     And I apologize for hanging over your**  
19 **shoulder, but I don't really have any other way of**  
20 **doing this.**

21                 **So, Mr. Michels talks about wind versus**  
22 **solar, starting at page 8; is that correct?**

23          A.     Just give me a moment to review this.

24          **Q.     Sure.**

25          A.     Okay. So Mr. Michels' costs are on this

1 table on page 14.

2 **Q. And those costs are from the 2014 IRP.**  
3 **Right?**

4 A. Correct. But as you pointed out earlier,  
5 the 2014 IRP is a 10-year look forward.

6 **Q. He -- he didn't attempt to project what**  
7 **capital costs for winds were going to be in 2020, did**  
8 **he? Nowhere in this testimony does he do that, does**  
9 **he?**

10 A. He doesn't say either way.

11 **Q. Now, going back to the numbers we just**  
12 **calculated, the 8081 for solar, again using the 1600**  
13 **per watt DC number projected by Brattle in 2020,**  
14 **22 percent capacity factor of .9 conversion and the**  
15 **Wind Vision wind capital cost assumptions and capacity**  
16 **factor assumptions in 2020. Based on those**  
17 **comparisons, the worst wind and the highest cost wind**  
18 **and the Wind Vision report is 32 percent less**  
19 **expensive than the cost of solar projected by Brattle**  
20 **in 2020 using those parameters; isn't that right?**

21 A. Yes. That sounds right for the documents  
22 that you have extracted these numbers from.

23 **Q. If the wind did cost 1758 as the Wind**  
24 **Vision report assumes, the worst -- the highest cost**  
25 **wind in 2020, and using the parameters we were just**

1 **talking about for solar, 22 percent .9 conversion, the**  
2 **solar would have to cost \$1,208 on an AC basis to be**  
3 **equivalent to that wind with the capacity factors that**  
4 **Wind Vision was using, the worst capacity factors; is**  
5 **that right?**

6 A. Yes. Leaving aside Mr. Michel's \$2,400 a  
7 KW and using your hypothetical numbers, I think you  
8 are correct.

9 **Q. And those hypothetical numbers are for**  
10 **wind. They're from the DOE in 2015, are they not?**

11 A. That is correct. That's -- let's be  
12 clear.

13 **Q. I --**

14 A. DOE puts out many reports. They're from  
15 DOE what? What is the title of that report? I'm just  
16 clarifying with you. You said DOE.

17 **Q. I think you can read the title. You've**  
18 **answered my question.**

19 A. Okay. So that is the Wind Vision report.  
20 I just want to be clear. It's the Wind Vision report.

21 **Q. Now, we talked earlier about your**  
22 **citation to -- in PE-27 EIA's Annual Energy Outlook,**  
23 **did we not?**

24 A. Correct.

25 MR. LOWERY: Another exhibit marked, Your

1 Honor. Next-to-last one, if you're wondering. I  
2 believe this will be 70.

3 (ATXI Exhibit 70 was marked for  
4 identification.)

5 BY MR. LOWERY:

6 **Q Mr. Powers, you have what's been marked**  
7 **Exhibit 70 in front of you?**

8 A. I do.

9 **Q. Do you recognize that as being levelized**  
10 **cost information from the Annual Energy Outlook put**  
11 **out by EIA in 2015?**

12 A. I do.

13 **Q. And that's the same Annual Energy Outlook**  
14 **and same agency that produced the -- your PE-27?**

15 A. Give me just one moment.

16 Correct.

17 **Q. I apologize. That's correct?**

18 A. Correct.

19 **Q. Do you see in the third full paragraph**  
20 **where DOE indicates that levelized cost of energy,**  
21 **that it has abbreviated as LCOE, is a convenient**  
22 **summary measure of the overall competitiveness of**  
23 **different generating technologies?**

24 A. Correct.

25 **Q. You wouldn't disagree with that**



1 **statement, would you?**

2 A. No.

3 Q. **Ameren Missouri and other utilities use**  
4 **levelized cost of energy in their resource planning as**  
5 **a measure, do they not?**

6 A. They do.

7 Q. **And one of the good things about a**  
8 **levelized cost of energy comparison is that it**  
9 **accounts not just for capital costs but it accounts**  
10 **for -- if applicable, it would account for fuel costs,**  
11 **but it also accounts for fixed and variable ONM,**  
12 **financing cost and capacity factors, does it not?**

13 A. It does.

14 Q. **Take a look at -- over on page 6 and it's**  
15 **Table 1.**

16 A. I am there.

17 Q. **Table 1 is reporting U.S. average**  
18 **levelized costs for plants entering service in 2020,**  
19 **is it not?**

20 A. Yes.

21 Q. **And it's indicating that for plants**  
22 **entering service in 2020, so for a wind farm that goes**  
23 **into service in 2020 or for a solar facility that goes**  
24 **into service in 2020, that the levelized cost of**  
25 **energy for the wind is 7,360 per megawatt hour and for**

1 solar PV, which is what we've been talking about here  
2 today, it's \$125.30 per megawatt hour. Right?

3 A. That is what this table shows. Correct.

4 Q. And I've got one more exhibit, Your  
5 Honor. I take it it will be 71.

6 JUDGE PRIDGIN: Correct.

7 (ATXI Exhibit 71 was marked for  
8 identification.)

9 BY MR. LOWERY:

10 Q Mr. Powers, you can see that Exhibit 71  
11 is also some of the documentation arising out of the  
12 annual energy outlook for 2015 issued by the EIA.  
13 Correct?

14 A. Correct.

15 Q. And I want to direct your attention to  
16 the second page of Exhibit 71. And do you see that it  
17 is EIA's data looking at what renewable energy  
18 generation capacity -- generation capacity, generation  
19 will be or predicted to be in the future out to 2040.  
20 Do you see that?

21 A. I do.

22 Q. And for solar and for wind, we've got --  
23 and I'm going to just focus -- it'll speak for itself,  
24 but I'm going to focus on the 2025 figure for a  
25 moment. It's showing solar is expected to be 58.7

1 **gigawatts in 2025. Right?**

2 A. Correct.

3 **Q. And wind is expected to be 234.9**  
4 **gigawatts in 2025. Correct?**

5 A. I might be looking at the wrong column.

6 **Q. In 2025?**

7 MR. LOWERY: May I approach, your Honor?

8 JUDGE PRIDGIN: You may.

9 THE WITNESS: So you're -- I was looking  
10 at this chart here. You're here (indicating),  
11 generation?

12 BY MR. LOWERY:

13 **Q. I apologize. I may have pulled -- excuse**  
14 **me, Mr. Powers. May I take a look at this?**

15 **Let me go back here. Wrong table. Table**  
16 **A-16.**

17 **Now, are we on the same page, Table A-16**  
18 **renewable energy generating capacity and generation?**

19 A. Yes.

20 **Q. And I've actually -- I see what I did. I**  
21 **put this together backwards.**

22 **But if you look at the reference case**  
23 **that EIA was using, what they're predicting for 2025**  
24 **again is 58.7 gigawatts solar and 234.9 gigawatts**  
25 **wind. Correct?**

1 A. Correct.

2 Q. And wind, they say, in 2013 was 167.8.  
3 That's presumably historical data. Would you agree?

4 A. Correct.

5 Q. And solar was about 18.5. Right?

6 A. Correct.

7 Q. And they show a growth rate -- annual  
8 growth rate, and solar is expected to grow more  
9 quickly by EIA at 6.8 percent per year. Right?

10 A. That is correct.

11 Q. But wind is also expected to grow at  
12 2.4 percent per year. Right?

13 A. According to EIA, that is correct.

14 Q. And you contend that growth and wind for  
15 2013 to 2025, if EIA was right, from 167.8 to 234.9  
16 reflects growth prospects for wind that are poor, that  
17 are not good. Is that your contention?

18 A. I clearly don't agree with EIA's  
19 projection.

20 Q. But you agreed with EIA when they said in  
21 the one page that you pulled out of another report  
22 that the growth prospects or capital costs for wind  
23 were assumed to go up. You agreed with them then.  
24 Right?

25 A. I did.

1           **Q. I think you told me before that, if you**  
2 **were going to build a 600 megawatt solar facility --**  
3 **utility-scale solar facility, or you could build a**  
4 **combination, I suppose, that equaled 600 megawatts,**  
5 **that it would take about 3,600 acres of land, if you**  
6 **ground them out at those; is that right?**

7           A. Thirty-six hundred acres of land for what  
8 size?

9           **Q. Six hundred megawatt solar facility.**

10          A. Approximately.

11          **Q. Do you agree that's 156,816,000 square**  
12 **feet?**

13          A. Could you repeat that number?

14          **Q. About 157 million square feet?**

15          A. That is exactly right.

16          **Q. You haven't studied the available space**  
17 **on roof tops and parking lots in Kirksville, Missouri**  
18 **for solar facilities, have you?**

19          A. I have not.

20          **Q. I'm sure you wouldn't contend that**  
21 **there's 157 million square feet available, would you?**

22          A. I don't think I've contended that you  
23 would put 600 megawatts of solar into Kirksville,  
24 Missouri.

25          **Q. Fair enough.**

1 MR. LOWERY: Give me just a second, Your  
2 Honor. I believe that might be all I have.

3 Your Honor, thank you very much.  
4 Mr. Powers, thank you. That's all the questions I  
5 have.

6 JUDGE PRIDGIN: Mr. Lowery, thank you.

7 MR. LOWERY: And I would like to admit --  
8 move for admission of 62, 63 and 66 through 71.

9 JUDGE PRIDGIN: All right. Those  
10 exhibits have been offered. Any objections?

11 Hearing none, Exhibits 62, 63 and then 66  
12 through 71 are all admitted.

13 (ATXI Exhibits 62, 63, 66, 67, 68, 69, 70  
14 and 71 were received into evidence.)

15 JUDGE PRIDGIN: All right. This looks to  
16 be a good breaking point for lunch. When we resume,  
17 we will have Mr. Powers back on the stand and we will  
18 have Bench questions. We will stand in recess until  
19 1:30.

20 Anything else from counsel? All right.  
21 Thank you. We're off the record.

22 (A recess was taken.)

23 JUDGE PRIDGIN: All right. Good  
24 afternoon. We're back on the record. When we left, I  
25 think we had finished cross-examination with

1 Mr. Powers and we're ready for Bench questions.  
2 Anything further from counsel before the Bench has  
3 questions for this witness?

4 All right. Hearing nothing,  
5 Mr. Chairman, when you're ready, sir.

6 QUESTIONS BY CHAIRMAN HALL:

7 Q. Good afternoon, Mr. Powers.

8 A. Yes, sir.

9 Q. I really hesitated to -- to ask this  
10 question, but it almost seems like it's the elephant  
11 in the room so I'm going to go ahead and go forward.

12 You take issue with a number of  
13 assumptions and a number of aspects of Ameren's  
14 analysis in this case, the assumptions and analysis  
15 that led them and led MISO to believe that this was --  
16 that the construction of this transmission line  
17 made -- made good economic sense.

18 And you raise questions about their  
19 assumptions with regard to the cost of wind power, as  
20 to the cost of solar. You -- you raise some concerns  
21 about load growth, voltage regulation, line capacity  
22 assumptions. You also suggest that some demand-side  
23 programs, generally demand response in particular,  
24 could address the need that Ameren is trying to  
25 address.

1                   **What I want to understand here is, is**  
2                   **this just an honest disagreement amongst experts or**  
3                   **what do you attribute such differences of opinion on**  
4                   **so many key issues between yourself and Ameren's**  
5                   **experts?**

6                   A.       Chairman, that is an excellent question.  
7                   And I have done projects not only in MISO territory,  
8                   but California Independent System Operator territory  
9                   and I'm somewhat familiar at this point with the  
10                  approach that's being taken.

11                  And my impression is that the function of  
12                  the ISOs is add to the bulk electric system; meaning,  
13                  there is one solution to every problem and that is to  
14                  build more high-voltage transmission. And as a  
15                  result, everything gets funneled through that lens  
16                  is -- yes, you can build more high-voltage  
17                  transmission to solve voltage issues on the 161 KB  
18                  system in northeast Missouri. You could also put in  
19                  voltage regulation devices. You -- there are a number  
20                  of different approaches that could be taken.

21                  But as Mr. Kramer pointed out in his  
22                  testimony, we were looking at voltage regulation  
23                  devices to resolve these issues in northeast Missouri  
24                  when the MISO board of directors voted to approve the  
25                  MVP portfolio. At that point we stopped looking at



1 any other solution.

2 And so it's not that there are not other  
3 solutions. It's that the -- the institutional focus  
4 is on the high-voltage transmission system and solving  
5 problems through high-voltage transmission additions,  
6 in my opinion.

7 **Q. Well, wasn't -- wasn't this project**  
8 **submitted to MISO by Ameren?**

9 A. Well, this particular project is part of  
10 a much bigger portfolio of projects.

11 **Q. Right.**

12 A. And there are a dozen of them at least.  
13 And my understanding is that -- let me step back. Are  
14 you saying that --

15 **Q. Was --**

16 A. -- the possib--

17 **Q. No, I'm sorry. Go ahead.**

18 A. Was the pos-- was this project not  
19 conceived by MISO but initially proposed by ATXI as a  
20 solution and MISO pulled it into the MVP portfolio?

21 **Q. That's my understanding of how it worked.**  
22 **You tell me if I'm wrong.**

23 A. I can't comment on that. I don't know  
24 the genesis of the proposal.

25 **Q. Okay. Well, so I think I understand. I**

1 mean, your -- your answer that there is a  
2 institutional -- and you didn't use the word, but an  
3 institutional bias towards building more transmission  
4 for -- for all identified problems on -- on behalf of  
5 the ISO. And so I guess my question then is -- is how  
6 do you explain this alleged bias on behalf of the  
7 utility itself?

8 A. Well, the -- I do know that the best rate  
9 of return that a utility makes is on transmission  
10 projects. And so it doesn't surprise me if they have  
11 a suite of opportunities available and they're going  
12 to get a better rate of return on transmission, that  
13 they would put transmission forth at least initially  
14 as the first. Step if it doesn't work out, then  
15 they'll go down a different road.

16 Q. Okay. Thank you.

17 A. You're welcome.

18 JUDGE PRIDGIN: Mr. Chairman, thank you.  
19 Commissioner Kenney?

20 COMMISSIONER KENNEY: No.

21 JUDGE PRIDGIN: Commissioner Stoll?

22 COMMISSIONER STOLL: No. Thank you for  
23 your testimony, sir.

24 JUDGE PRIDGIN: Any recross based on  
25 Bench questions? Public Counsel.

1 MR. OPITZ: No questions, your Honor.

2 JUDGE PRIDGIN: Staff.

3 MS. MYERS: No questions, your Honor.

4 JUDGE PRIDGIN: Thank you. MIS0.

5 MR. SMALL: No questions, your Honor.

6 JUDGE PRIDGIN: ATXI.

7 MR. LOWERY: No questions, your Honor.

8 JUDGE PRIDGIN: Thank you. Redirect.

9 MS. HERNANDEZ: Yes. Thank you.

10 REDIRECT EXAMINATION BY MS. HERNANDEZ:

11 Q. Mr. Powers, do you remember the Staff  
12 Exhibit, Exhibit 61, which is actually a reference in  
13 your testimony. Correct? Do you remember that --

14 A. Yes.

15 Q. -- exhibit?

16 Can you explain what would happen in that  
17 situation with the WECC?

18 A. Yes. Just give me one moment to get to  
19 that. That project that was mentioned, Palo Verde to  
20 west wing double line outage probability analysis, in  
21 the Exhibit 17 to my Rebuttal Testimony, it is a table  
22 from a WECC document. And -- which is regarding these  
23 performance category upgrade requests.

24 Basically what that means is taking a  
25 deterministic category C -- a generic category C that

1 the utility has to mitigate in some fashion and  
2 converting it into a category D, which is an extreme  
3 category for which mitigation is not necessary. And  
4 second page of that exhibit, called attachment 2, has  
5 a list of seven different cases where western  
6 utilities have applied to the WECC to convert a  
7 category C to a category D based on probability.

8 This particular project is -- on this  
9 table, you can see that sixth of seven projects is  
10 this one, Palo Verde west wing. Date the board of  
11 directors approved this change, August of 2003.

12 The -- the regional criterion that I'm talking about  
13 was actually approved in December 2011 by the WECC  
14 board of governors.

15 And what they did at that point was say,  
16 Look, instead of -- to paraphrase -- having individual  
17 utilities come to us again and again and again with  
18 these probability analyses, let's just establish that  
19 if your project meets certain characteristics, it's a  
20 category D; it is not a category C.

21 And that is what became a generic WECC  
22 reliability criterion that if you have two lines that  
23 are not in the same right-of-way for more than a short  
24 period of time, then the chances of a failure are  
25 going to be a double failure less than once in

1 30 years; therefore, these are just categorically  
2 category D events that don't require mitigation.

3 **Q. And I think I recall you mentioning an**  
4 **18 million dollar number also in regard to that**  
5 **question. Do you recall your response?**

6 A. Right. My point there was the share of  
7 Ameren Missouri customers of the Mark Twain line or  
8 the capital cost is 18 million dollars. However, if  
9 that capital cost is being justified substantially on  
10 the reliability of the Mark Twain line addressing the  
11 reliability issues in northeast Missouri, then  
12 potentially simply the Missouri PSC requesting of  
13 CERC, which is the regional entity for reliability for  
14 NERC, that it, for consistency reasons, adopt this  
15 WECC guidance that if your -- your loss of two line  
16 situation is the same as this one and ou-- in WECC you  
17 have determined that's a category D, then do it here  
18 as well.

19 That's an administrative action that  
20 costs Missouri ratepayers nothing and potentially  
21 eliminates largely this issue of -- of local  
22 reliability or reliability issues in northeast  
23 Missouri.

24 **Q. And you were asked a question by**  
25 **Mr. Lowery about -- asking whether you've been a**

1 **transmission planner or designer or authorizing**  
2 **transmission lines. Do you recall that question?**

3 A. I do.

4 **Q. Do you have any experience that would**  
5 **allow you to evaluate the project subject to this**  
6 **case?**

7 A. Yes. And the -- my experience has been  
8 involved in -- or my experience has been in presenting  
9 no-wires alternatives to transmission project  
10 proposals over the last ten years or so. And  
11 Mr. Lowery is correct that I have not taken courses in  
12 transmission planning or worked as a transmission  
13 planner, but I have had on multiple occasions to  
14 evaluate the justification for the transmission  
15 project, present the case that that transmission  
16 project could potentially be served more efficiently  
17 by other alternatives and gone through the entire  
18 Rebuttal, Surrebuttal, cross-examination phase.

19 And on at least two occasions, the  
20 administrative law judge has sided with my client and  
21 with my own point of view that the transmission  
22 project was denied, at least at the administrative law  
23 judge level and that that was based in part on the  
24 testimony that I had given. So I do feel that  
25 though the -- the best classroom is this classroom

1 when the transmission management of a utility that is  
2 attempting to get permission for a multi-hundred  
3 billion dollar -- or million dollar project is  
4 examining and countering the testimony given.

5 **Q. All right. Thank you. Do you remember a**  
6 **question asked by Mr. Lowery about the bat studies**  
7 **that are a part of your -- or the environmental**  
8 **documents that are part of your testimony?**

9 A. Yes.

10 **Q. What other costs do you consider when**  
11 **evaluating transmission projects?**

12 A. Well, the first order is, as Mr. Lowery  
13 pointed out, the comparative cost of the -- of the  
14 type of generation; be it wind or solar levelized  
15 cost. But in addition to that, the -- there is an  
16 obligation to look at any other negative impacts that  
17 may come -- or at least document them as negatives in  
18 assessing the two options.

19 For example, if we had wind and solar and  
20 solar has no impact on the environment depending on  
21 how it's installed on roof tops, parking lots, for  
22 example, and the alternative involves potentially  
23 degradation of habitat, degradation of farmland, loss  
24 of farm value, all of that has to be considered. I'm  
25 not an expert in those areas. I can acknowledge that

1 they must be considered in making that balance.

2 **Q. Do you still have the -- the deposition**  
3 **transcript in front of you?**

4 A. Yes.

5 **Q. Mr. Lowery asked you a question on**  
6 **page -- I think it was large page 14 of the four**  
7 **pages, page 54 of the deposition.**

8 A. I'm there.

9 **Q. Do you recall that question?**

10 A. Yes.

11 **Q. And he asked you a question and then you**  
12 **were giving a response and your response was cut off.**  
13 **What else were you going to testify to at that point?**

14 MR. LOWERY: Objection, your Honor. I  
15 impeached the witness with a prior inconsistent  
16 statement. All I did was ask him if I read the  
17 question and answer correctly. They can't effectively  
18 use the deposition to bring in an explanation in  
19 response to impeachment.

20 JUDGE PRIDGIN: I'll over--

21 MR. LOWERY: You can ask him about the  
22 topic of the question, but she can't -- she can't ask  
23 him to sort of try to undo the impeachment in that  
24 fact.

25 JUDGE PRIDGIN: I'll overrule. It goes



1 to his credibility and she's allowed to try to  
2 rehabilitate the witness, so I'll overrule.

3 THE WITNESS: Could you repeat the  
4 question?

5 BY MS. HERNANDEZ:

6 Q. Sure. I was going to ask you what --  
7 when you were -- the question was -- or the response  
8 was cut off, what else were you going to testify to at  
9 that point?

10 A. I wanted to continue to -- to read the  
11 next question and answer and especially beginning at  
12 line 18 where I state: My opinion is that wind, even  
13 in the MISO, is rapidly losing its primacy on cost for  
14 renewable energy. Solar power can compete with wind.  
15 You're not going to build a tremendous amount of wind  
16 power in western MISO if you can get the same megawatt  
17 hours at a better time of day with a different type of  
18 renewable type of technology. So I don't see the  
19 future being wind power in the western MISO.

20 Q. Thank you. Do you recall being asked  
21 about some figures before an ITC credit was applied  
22 and how that was continued for wind and solar into the  
23 future?

24 A. Yes.

25 Q. What is your opinion of solar and wind

1 **costs in the future with the ITC continuation?**

2 A. I think with the ITC continuation that  
3 the current trend will also continue, which is a  
4 relatively constant or static cost for wind power and  
5 a continuing steady decline in the value of solar  
6 power. As the exchange we had earlier, we talked  
7 about wind power and solar power in 2014 or 2016; the  
8 issue being are they comparable now.

9 But in a few years' time, there's no  
10 question in my mind that solar power on a dollar per  
11 megawatt hour basis will be substantially lower than  
12 wind power. One example is what is happening at the  
13 Cedar Falls utility in Iowa. Public utility,  
14 northeast Iowa, strong wind, weakest solar in the  
15 state just opted for solar for a community power  
16 program over wind.

17 It acknowledges that wind has a somewhat  
18 better capacity factor, but that the solar power is  
19 coming at the right time of day and is a better fit  
20 for that application. And I think that's the point of  
21 the lance in the Midwest. That will continue to  
22 happen when you look at the price benefits of solar  
23 and the continued decline in solar cost.

24 **Q. Okay. Exhibit 67 that Mr. Lowery**  
25 **questioned you on, it was the Wind Vision document.**

1 **Do you recall that line of questioning where he -- he**  
2 **directed you to some conclusions about the role of**  
3 **wind power in the US?**

4 A. Yes.

5 **Q. How US wind penetration future is**  
6 **achievable, affordable, beneficial -- he pointed you**  
7 **to those headers. Do you recall that line of**  
8 **questioning?**

9 A. Yes.

10 **Q. What's your characterization of this**  
11 **document that you were asked about?**

12 MR. LOWERY: Objection, calls for -- I'm  
13 not sure I understand the question. Calls for  
14 speculation, it seems to me. If he's being asked to  
15 tell us what DOE intends for this document to overall  
16 suggest or not suggest, then he's speculating about  
17 what DOE has in mind. Document speaks for itself.

18 JUDGE PRIDGIN: And maybe I misunderstood  
19 the question. I thought it was something along the  
20 lines of what is your characterization or something.  
21 I think she was asking his -- his thoughts on the  
22 document. That's how I understood the question  
23 anyway. So with that, I'm going to overrule that.

24 THE WITNESS: To me, this document is an  
25 effort to put the best foot forward for wind power,

1 the best view of its prospects going forward. The --  
2 I think it does include an estimate in here of -- we  
3 went through a lot of documents, but there was a  
4 comparative chart in here on solar power.

5 And -- and I may be mixing one of these  
6 other DOE documents that we looked at just before  
7 lunch, but bottom line is the wind documents are  
8 indicating that -- that when they compare to solar,  
9 that solar is high cost. And in my Rebuttal  
10 Testimony, I list actual contract prices, actual bid  
11 prices that are a fraction of what is being used in  
12 the IEA [sic]. And I'm not sure if Wind Vision  
13 includes a cost value, but it -- the Wind Vision is  
14 only coherent if wind power is, in fact, a much better  
15 economic deal than solar power and it is not.

16 **Q. You were also asked about an Exhibit 71,**  
17 **which is the EIA assumptions that Mr. Lowery provided**  
18 **to you and asked you some questions on. Do you**  
19 **remember that document?**

20 A. 43 -- the exhibits that were handed to me  
21 don't have exhibit numbers on them. There is a  
22 two-pager, then there is -- there are two EIA  
23 exhibits. I think it must be the one, Levelized Cost  
24 and Levelized Avoided Cost.

25 **Q. He was -- the one that's at the top,**

1 **Analysis and Projection Assumptions.**

2 A. Right.

3 **Q. And the Table A16 is what he inquired**  
4 **about.**

5 A. Right.

6 **Q. Why do you disagree with EIA's assumption**  
7 **of growth from 2013 to 2025?**

8 A. The -- the reason I disagree is the --  
9 these two exhibits -- EIA exhibits, they're addressing  
10 essentially the same thing a few months apart. The  
11 prior exhibit Levelized Cost and Levelized Avoided  
12 Cost, EIA, June 2015; Analysis and Projections and  
13 Assumptions to AEO 2015, September 2015 EIA.

14 Well, in the levelized cost and levelized  
15 avoided cost, Table -- Table A5, which we discussed,  
16 it shows solar PV estimated cost 117 dollars a  
17 megawatt hour and above it, wind, 75 dollars a  
18 megawatt hour. If wind power was 75 dollars a  
19 megawatt hour and solar power was 117 dollars a  
20 megawatt hour, this analysis would have more -- would  
21 be coherent and that is the number that they are  
22 using.

23 But as I put in my testimony, the -- in  
24 Texas, in California, bids are coming in at 40 dollars  
25 a megawatt hour for solar, 45 dollars a megawatt hour

1 for solar. These are current prices. If EIA chooses  
2 to use a number of 117 dollars a megawatt hour, that's  
3 their choice. But what it makes this analysis, is  
4 irrelevant. It is not consistent with current  
5 pricing.

6 **Q. Okay. And based on your -- based on your**  
7 **testimony in this case and your analysis of the info--**  
8 **information presented to you, what is your position in**  
9 **regard to the Mark Twain transmission project?**

10 A. The CP -- CPCN application says that Mark  
11 Twain will be built to facilitate the building of wind  
12 power in Missouri presumptively at a -- at the most --  
13 most cost effective form of renewable energy and that  
14 it will resolve some reliability issues in northeast  
15 Missouri.

16 And my opinion is that there are more  
17 cost effective ways to do that without the  
18 environmental impact associated with the line and that  
19 the line has not been shown by the applicant to -- to  
20 provide sufficient benefits or any benefit that is  
21 would make it -- make it a cost that should be borne  
22 by Missouri ratepayers.

23 **Q. That's all the questions I have. Thank**  
24 **you.**

25 JUDGE PRIDGIN: Mr. Hernandez -- or

1 Ms. Hernandez, thank you.

2 Mr. Powers, you can step down. And I  
3 believe we're ready now for Mr. Vosberg and then  
4 Mr. Wood will be next.

5 Mr. Vosberg, if you'll step up, please.  
6 If you'll raise your right hand to be sworn, please.

7 (Witness sworn.)

8 JUDGE PRIDGIN: Thank you very much, sir.  
9 You may have a seat.

10 THE WITNESS: Thank you.

11 JUDGE PRIDGIN: Mr. Lowery, when you're  
12 ready.

13 ROBERT M. VOSBERG, testified as follows:

14 DIRECT EXAMINATION BY MR. LOWERY:

15 **Q. Good afternoon. Could you state your**  
16 **name for the record, please.**

17 A. Robert Vosberg.

18 **Q. Mr. Vosberg, did you cause to be -- did**  
19 **you prepare and cause to be filed in this docket**  
20 **Surrebuttal Testimony that I'll indicate to you has**  
21 **been marked for identification as Exhibit 17?**

22 A. That's correct.

23 **Q. Do you have any corrections to the**  
24 **testimony?**

25 A. No, I do not.

1           **Q.     If I were to pose the questions that are**  
2 **in that pre-filed testimony, would your answers here**  
3 **be the same today?**

4           A.     Yes, they would.

5           **Q.     And are those answers true and correct to**  
6 **the best of your information, knowledge and belief?**

7           A.     Yes.

8           MR. LOWERY: With that, your Honor, I'll  
9 ask for the admission of Exhibit 17 and tender  
10 Mr. Voss for cross-examination.

11           JUDGE PRIDGIN: Mr. Lowery, thank you.  
12 Any objections?

13           Hearing none, Exhibit 17 is admitted into  
14 evidence.

15           (ATXI Exhibit 17 was received into  
16 evidence.)

17           JUDGE PRIDGIN: Cross-examination Staff.

18           MR. WESTEN: Staff has no questions at  
19 this time.

20           JUDGE PRIDGIN: Thank you. MIS0.

21           MR. SMALL: No questions, your Honor.

22           JUDGE PRIDGIN: Public Counsel.

23           MR. OPITZ: No questions, your Honor.

24           JUDGE PRIDGIN: Neighbors United.

25           MS. HERNANDEZ: No questions. Thank you.



1 JUDGE PRIDGIN: Thank you. Anything from  
2 the Bench?

3 Thank you very much, sir. You may step  
4 down.

5 THE WITNESS: Thank you.

6 JUDGE PRIDGIN: I hope Mr. Wood didn't  
7 leave.

8 MR. LOWERY: I told you we were going to  
9 move along, Judge.

10 JUDGE PRIDGIN: That's more like it. Is  
11 Mr. Wood available?

12 MR. LOWERY: Mr. Wood I'm sure is  
13 probably on his way. I don't think we anticipated  
14 that happening quite so quickly.

15 MR. WILLIAMS: Judge, if it helps any,  
16 Staff has no questions for Mr. Wood.

17 JUDGE PRIDGIN: All right. Thank you.

18 MS. HERNANDEZ: I do have a few for  
19 Mr. Wood.

20 JUDGE PRIDGIN: All right. Thank you.

21 MR. TRIPP: Judge, he's parking just  
22 right down the street. He'll be here in a second.

23 JUDGE PRIDGIN: Mr. Wood, if you'll raise  
24 your right hand to be sworn, please.

25 (Witness sworn.)

1 JUDGE PRIDGIN: Thank you, sir.

2 Mr. Tripp, when you're ready, sir.

3 MR. TRIPP: Thank you, your Honor.

4 CHRISTOPHER J. WOOD, testified as follows:

5 DIRECT EXAMINATION BY MR. TRIPP:

6 Q. Mr. Wood, would you please state your  
7 full name?

8 A. Christopher J. Wood.

9 Q. How are you employed?

10 A. I work at Burns and McDonnell Engineering  
11 Company, Incorporated.

12 Q. And you're testifying here today on  
13 behalf of Ameren Transmission Company of Illinois?

14 A. That's correct.

15 Q. And are you the same Christopher J. Wood  
16 who caused to be prepared Direct and Surrebuttal  
17 Testimony in this case?

18 A. That's correct.

19 Q. And that Direct Testimony has been marked  
20 as Exhibit 15 --

21 A. Correct.

22 Q. -- correct?

23 And Surrebuttal Testimony marked as  
24 Exhibit 16?

25 A. Correct.

1           **Q. Do you have any changes to either of**  
2 **those testimonies?**

3           A. I do. On my Direct Testimony, on  
4 page 27, line 3, where it says Route 1, that should  
5 say Route 4. And then on my Surrebuttal Testimony,  
6 page 4, line 18, instead of "westernmost," that should  
7 say "easternmost." That's -- that's all.

8           **Q. Okay. So with those corrections, if I**  
9 **asked you the same questions that are contained in**  
10 **your pre-filed testimony, if I asked those today,**  
11 **would your answers under oath be the same?**

12          A. They would.

13          **Q. And is this Direct and Surrebuttal**  
14 **Testimony given to the best of your knowledge,**  
15 **information and belief?**

16          A. Yes.

17                 MR. TRIPP: Your Honor, at this time I  
18 move to admit into evidence Exhibits 15 and 16, and  
19 upon the acceptance, tender the witness for  
20 cross-examination.

21                 JUDGE PRIDGIN: Mr. Tripp, thank you.  
22 Any objections?

23                 Hearing none, 15 and 16 are admitted.

24                 (ATXI Exhibits 15 and 16 were received  
25 into evidence.)

1 JUDGE PRIDGIN: Cross-examination.  
2 Mr. Williams, I believe you said you had no cross.

3 MR. WILLIAMS: Correct.

4 JUDGE PRIDGIN: MISO.

5 MR. SMALL: No questions, your Honor.

6 JUDGE PRIDGIN: Public Counsel.

7 MR. OPITZ: No questions, Judge.

8 JUDGE PRIDGIN: Neighbors United.

9 CROSS-EXAMINATION BY MS. HERNANDEZ:

10 Q. Hello, Mr. Wood.

11 A. Hello.

12 Q. I'm --

13 A. Sorry.

14 Q. That's okay. As part of your work in  
15 this case, you worked on environmental planning; is  
16 that correct?

17 A. That's correct.

18 Q. And as part of that environmental  
19 planning, you had communications or relationships with  
20 the Missouri Department of Conservation and the United  
21 States Fish and Wildlife Service?

22 A. That is correct.

23 MS. HERNANDEZ: May I approach?

24 JUDGE PRIDGIN: You may.

25 MS. HERNANDEZ: I'm sorry. What are

1 we -- 72?

2 JUDGE PRIDGIN: Should be on 72. Yes.

3 (NU Exhibit 72 was marked for  
4 identification.)

5 BY MS. HERNANDEZ:

6 Q. You have in front of you a document that  
7 has been marked Exhibit 72. Do you recognize this  
8 document?

9 A. I do.

10 Q. It's correct it's a Data Request Response  
11 from ATXI to Neighbors United, specifically 8-6. Is  
12 that -- would you agree with that?

13 A. I agree.

14 Q. And if you look in the document, it's --  
15 let me ask, you've had communications during your  
16 planning of this case with a Jennifer Campbell-Allison  
17 with the Missouri Department of Conservation; is that  
18 correct?

19 A. Yes. I've had limited communications  
20 with her, but yes.

21 Q. Let me ask you to look on -- let's see,  
22 page 2 of November 21st, 2014 letter from Ms. Berry to  
23 Burns and McDonnell.

24 A. Okay.

25 Q. And let's see. The third paragraph down

1 would you agree that the Department of Conservation is  
2 raising some concerns, as they state there, about some  
3 forest blocks being fragmented by the proposed line  
4 where there's Indiana bat species and they provide a  
5 location for where those --

6 A. I would say that yes, they said that  
7 there's forested blocks crossed. I wouldn't say that  
8 each of them have an Indiana bat issue.

9 Q. Let me -- okay. Let me ask you then, A2.  
10 Can you read what that states, that -- in this  
11 communication from the Department of Conservation?

12 A. A2 would fragment a forest block of  
13 approximately 300 acres in size at T16 -- it's north  
14 range 8 west, section 36 and township 60 north; range  
15 7 west, sections 31 and 32.

16 Q. And what's the arrow underneath of that  
17 state?

18 A. Two *Myotis sodalis* Indiana bat records  
19 are located within six miles of where the A2 route  
20 segment and the subject forest block intersect.

21 Q. Okay. And can you read about the A3 --  
22 A3 comment?

23 A. A3 would fragment the following forest  
24 blocks, approximately 1,222 acres; township 59 north,  
25 range 9 west, sections 9, 10, 11, 14, 15, 22 and 23.

1 One Myotis sodalis record within five miles.  
2 Approximately 181 acres, township 60 north, range 12  
3 west, sections 23 and 24; approximately 206 acres,  
4 township 59 north, range 11 west, sections 13; and  
5 township 59 north, range 10 west, section 18. And  
6 then approximately 440 acres, township 60 north, range  
7 13 west, sections 1 and 2; and township 61 north,  
8 range 13 west, section 36; and township 61 north,  
9 range 12 west, section 31.

10 **Q. Okay. Thank you. And then if you could**  
11 **read the Department of Conservation's statement of the**  
12 **bullet point B9 start--**

13 MR. TRIPP: Your Honor, I have no  
14 objection to the admission of this entire exhibit.

15 JUDGE PRIDGIN: Did you want that  
16 offered, Ms. Hernandez?

17 MS. HERNANDEZ: I do. I do want to offer  
18 this exhibit, but I do have another question based on  
19 the exhibit.

20 JUDGE PRIDGIN: All right. 72 is  
21 offered. Any objections?

22 72 is admitted.

23 (NU Exhibit 72 was received into  
24 evidence.)

25 JUDGE PRIDGIN: Ms. Hernandez.

1 BY MS. HERNANDEZ:

2 Q. So would you agree at the bottom of the  
3 page B9 also talks about how there's eight *Myotis*  
4 *sodalis* -- and I'm not even going to attempt to say  
5 what the silver-haired bat's proper name is, but there  
6 are records for both of those species known within  
7 four miles of this forest block that they're speaking  
8 about; is that correct?

9 A. That's what it says.

10 Q. And then page 3, B13 bullet point also  
11 talks about how there's five *Myotis sodalis* and one  
12 silver-haired bat record that are known within three  
13 miles of this forest block; is that correct?

14 A. That's correct.

15 Q. On page 4 of the document, see the  
16 second-to-last paragraph? It talks about -- or it  
17 reads, If it would be helpful, the department would be  
18 willing to meet with Ameren, its consultant and the US  
19 Fish and Wildlife Service to discuss department  
20 comments provided for in this subject.

21 Did I read that accurately?

22 A. Yes, you did.

23 Q. And would you agree with me that ATXI did  
24 not hold a meeting with either the Missouri Department  
25 of Conservation or the Fish and Wildlife Service prior



1 **to selecting its final route?**

2 A. That is correct. Actually they were  
3 invited to our public open house as a community  
4 representative workshop. So they -- they did have the  
5 opportunity to attend those.

6 MS. HERNANDEZ: May I approach? May I  
7 approach?

8 JUDGE PRIDGIN: You may.

9 (NU Exhibit 73 was marked for  
10 identification.)

11 BY MS. HERNANDEZ:

12 **Q. You have in front of you what's been**  
13 **marked Exhibit 73. Do you recognize this document?**

14 A. I do.

15 **Q. And it's a Data Request Response from**  
16 **ATXI to Neighbors United 6-9, supplement 1. Would you**  
17 **agree?**

18 A. I agree.

19 **Q. Okay. And it's a December 5th, 2014**  
20 **letter from the United States Department of Interior**  
21 **Fish and Wildlife Service to Ameren Transmission.**  
22 **Would you agree with that?**

23 A. I agree.

24 **Q. And would you agree that this letter**  
25 **discusses the Mark Twain project, its segments and the**

1 bat species that -- let's see. I'll just -- there  
2 under the federally listed and proposed bat species,  
3 that paragraph there they state, Every county  
4 intersected by the proposed alignment is known to be  
5 occupied by maternal colonies of the endangered  
6 Indiana bat. Do you agree with that?

7 A. Yes. And I believe that's referring to  
8 the both north -- northern and southern routes.  
9 It's -- it's the reduced route network, not just a  
10 final route.

11 Q. And would you agree that the last  
12 sentence in that paragraph reads, The proposed  
13 endangered northern long-eared bats also occurs in  
14 northeast Missouri and has been documented in Lewis  
15 County?

16 A. That's what it says.

17 Q. Okay. Let me just -- let me back up a  
18 little bit too. The paragraph -- the sentence in that  
19 paragraph right after *Myotis sodalis* begins with,  
20 Furthermore?

21 A. Yep.

22 Q. It states, Furthermore, based on past  
23 surveys, the routes pass through five known maternal  
24 colony home ranges.

25 Did I read that correctly?

1 A. Correct.

2 Q. **And if I could have you turn to the last**  
3 **page of that document.**

4 A. Yes. I would point out that it doesn't  
5 specify which of the routes it goes by.

6 MS. HERNANDEZ: I'll move to strike that  
7 answer. It's unresponsive to the question I asked.

8 JUDGE PRIDGIN: I'll sustain. There was  
9 no question on the table.

10 BY MS. HERNANDEZ:

11 Q. **On the last page of the last paragraph --**  
12 **last paragraph, one, two, three, four five lines down,**  
13 **the sentence that begins on the fifth line. Are you**  
14 **there?**

15 A. Yes. Sorry.

16 Q. **No. I'll read that. The service**  
17 **requests a meeting with Ameren and the Missouri**  
18 **Department of Conservation to coordinate efforts on**  
19 **the Mark Twain transmission project before the final**  
20 **alignment is selected.**

21 **Would you agree that I read that**  
22 **correctly?**

23 A. I do.

24 Q. **And would you agree with me that that**  
25 **meeting did not occur prior to your selection of the**

1 **final alignment?**

2 A. That would be a question to address to  
3 Jim Jontry at ATXI.

4 **Q. Do you supervise someone by the name of**  
5 **Kevin Atkins?**

6 A. I do not.

7 MS. HERNANDEZ: Okay. I'd move for the  
8 admission of Exhibit 73. And that's all the questions  
9 I have. Thank you.

10 JUDGE PRIDGIN: Ms. Hernandez, thank you.  
11 Any objections?

12 Hearing none, Exhibit 73 is admitted.

13 (NU Exhibit 73 was received into  
14 evidence.)

15 JUDGE PRIDGIN: Time for Bench questions.  
16 Mr. Chairman.

17 CHAIRMAN HALL: Yes.

18 QUESTIONS BY CHAIRMAN HALL:

19 **Q. Good afternoon, Mr. Wood.**

20 A. Good afternoon.

21 **Q. Did you consider burying the line at any**  
22 **section? Was that an option on the table?**

23 A. That -- that would be a question for  
24 ATXI.

25 **Q. Well, I -- so were you -- when you were**

1 **doing your site selection process, you -- you did not**  
2 **take into account the possibility of burying a line at**  
3 **all? I find that hard to believe.**

4 A. Again, that would be a question for ATXI.

5 Q. **Do you -- do you know the cost**  
6 **differential to bury a line versus an overhead line?**

7 A. I do not. That's a question for --

8 Q. **I get it.**

9 A. Yeah, sorry.

10 Q. **There's been a common -- well, I won't**  
11 **say common -- a frequent complaint about the -- the --**  
12 **the proposed line, that it cuts diagonally across a**  
13 **great number of parcels. Do you know how many parcels**  
14 **there is a diagonal cut across?**

15 A. I do not know the exact number, no.

16 Q. **Would you have any way of -- I mean I may**  
17 **not be using the right terminology. Can you help me**  
18 **out? Is there a -- a correct term for -- for that --**  
19 **for a diagonal cut across a parcel?**

20 A. I think just a diagonal cut.

21 Q. **Okay. I got that right then. So you**  
22 **don't -- was that something you were trying to avoid?**

23 A. Yeah. I mean we -- we try to follow  
24 property lines or fence license or kind of the lines  
25 of division if we could or existing linear -- linear

1 infrastructure. But, you know, we've got to balance  
2 avoiding constraints, whether that be forest lands or  
3 residences or conservation areas or culture resource  
4 sites. And so, you know, that's -- that's one of the  
5 big reasons why we go diagonal is to avoid  
6 constraints.

7 **Q. You also mentioned that you tried to**  
8 **avoid angles. Could you explain to me why you were**  
9 **trying to avoid angles?**

10 A. Because angles are -- they're more costly  
11 to design and they're generally more costly to  
12 construct.

13 **Q. Why is that?**

14 A. That would be a question for Dave Endorf  
15 at ATXI.

16 **Q. You mentioned a couple times in your**  
17 **testimony questionnaires that were submitted during**  
18 **the public open house process. How many**  
19 **questionnaires were submitted total?**

20 A. I don't --

21 **Q. And --**

22 A. I don't know off the top of my head.

23 **Q. I'd be curious to find -- to find the**  
24 **answer to that question.**

25 A. Actually, it might --

1 Q. And I'd also be curious -- was it the  
2 same questionnaire that was submitted at every open  
3 house? And in particular I'm -- I'm curious about the  
4 questions as to the routing factors most important to  
5 the public. And that's referenced on page 22 and page  
6 26 and a couple other places in your Direct Testimony.

7 Because I think that makes sense. I  
8 think it makes sense for you to find out what factors  
9 are the most important to the public. I'm just  
10 curious as to how those questions were phrased in the  
11 questionnaire and I'd be curious as to how many  
12 responses you received.

13 A. I'm going to look real quick. I think I  
14 might have that information in here.

15 Q. Okay.

16 A. Okay. There were 451 questionnaires that  
17 were returned.

18 Q. And -- and I'm sorry to interrupt. So is  
19 that from 451 different landowners or is it possible  
20 that you had a landowner submitting more than one?

21 A. That's a possibility.

22 Q. I -- I assume you tried to control for  
23 that --

24 A. Yes.

25 Q. -- possibility.

1                   **okay. So 451. Is there a sample**  
2 **questionnaire that's in the record?**

3                   MR. TRIPP: Isn't that Schedule 1 of your  
4 Direct?

5                   THE WITNESS: Yes. It's in Schedule 1.

6                   CHAIRMAN HALL: I don't have it.

7                   COMMISSIONER KENNEY: Is that direct or  
8 indirect?

9                   THE WITNESS: Direct.

10 BY CHAIRMAN HALL:

11                   **Q. I think this is it. So is it schedule**  
12 **CJ-- CJW-01?**

13                   A. That's correct.

14                   MR. TRIPP: Sorry to interrupt. Just for  
15 clarification, it looks like there's the proposed  
16 route questionnaire that's -- and then also later on,  
17 a reduced route network questionnaire. It looks like  
18 there were two different form questionnaires.

19                   CHAIRMAN HALL: So which one is CJW-01?

20                   MR. TRIPP: I'm sorry, Commissioner Hall.  
21 They're both included in CJW-01. I apologize.  
22 Probably should have done those separately.

23                   Chris, can you count pages and see how  
24 far back that is?

25                   THE WITNESS: Yeah. It's only about --



1 it's about two or three pages into the schedule.

2 BY CHAIRMAN HALL:

3 **Q. There we go.**

4 A. Actually, I'm sorry. That's the  
5 community representative forum survey. We had one for  
6 the community representative forum. We also had one  
7 for the open -- for both rounds of the open houses.

8 **Q. And you had 451 responses to -- to all of**  
9 **these?**

10 A. To the questionnaire from the public.

11 **Q. Well, there's apparently two**  
12 **questionnaires.**

13 A. We had two rounds of open houses.

14 **Q. So again, is it 451 total?**

15 A. I'd have to -- I don't know. I'd have to  
16 check. I believe so.

17 **Q. Okay. I apologize. I did not have this**  
18 **to review before I started asking questions. Is it --**  
19 **is it safe to say that the route that you've chosen is**  
20 **not the least cost route?**

21 A. I can't comment on that. That would be a  
22 question for ATXI as far as cost.

23 **Q. Well, cost was not your -- so cost was**  
24 **not a factor?**

25 A. It was indirectly captured through length

1 and number of angles, but it wasn't a specific factor.

2 **Q. So length and angles would be the only**  
3 **two factors that would affect cost from -- from your**  
4 **perspective?**

5 A. As far as what we were looking at, those  
6 were representative of -- of cost.

7 **Q. Okay. Okay. All right. I have no**  
8 **further questions. Thank you.**

9 JUDGE PRIDGIN: Mr. Chairman, thank you.

10 COMMISSIONER STOLL: I have no questions.  
11 Thank you for your testimony.

12 JUDGE PRIDGIN: Commissioner Kenney.

13 COMMISSIONER KENNEY: Yeah, I'll be  
14 brief.

15 QUESTIONS BY COMMISSIONER KENNEY:

16 **Q. On pages 31, 33 and 35 of your Direct**  
17 **Testimony you have a photo that captures about 2 --**  
18 **2 and a quarter sections, approximately two miles**  
19 **long, about a mile and a quarter in width.**

20 A. That's correct.

21 **Q. That's for the substation going from**  
22 **Zachary to Adair. Correct?**

23 A. That's correct.

24 **Q. All right. I want the same thing --**  
25 **where do I find the same thing for the other 95 miles**

1 **within two-mile segments so I can see what the**  
2 **topography looks like below it?**

3 A. I know we have more detailed maps on our  
4 website.

5 Q. **That's fine. Is it -- do you have an**  
6 **aerial shot of each -- you know, that shows how it**  
7 **goes?**

8 A. I mean the reason we're able to make this  
9 so zoomed in --

10 Q. **I understand.**

11 A. -- is just because it's only 2.2.

12 Q. **But you took that picture from above.**  
13 **Correct? Or did you take it off of Google Earth?**

14 A. I think we had this area flown. So this  
15 would be actual aerial photography.

16 Q. **Did you fly the entire other -- the**  
17 **95-mile section too?**

18 A. That's correct.

19 Q. **So you have photos of all that?**

20 A. Correct.

21 Q. **Can I get a copy of those from somewhere?**  
22 **I'm sure someone has it.**

23 MS. HERNANDEZ: We -- yeah, it's a DR  
24 response. I'm sorry. I actually wanted to print  
25 copies for the Commission, but it was given to us

1 copyrighted so I couldn't print copies.

2 COMMISSIONER KENNEY: Really?

3 THE WITNESS: I guess I would have to let  
4 ATXI decide -- decide if they're able to do that.

5 BY COMMISSIONER KENNEY:

6 **Q. Okay. Then I'll ask ATXI. Thank you.**

7 A. You're welcome.

8 JUDGE PRIDGIN: Commissioner Coleman?

9 COMMISSIONER COLEMAN: No.

10 JUDGE PRIDGIN: Recross based on Bench  
11 questions. Staff.

12 MR. WILLIAMS: No, thank you.

13 JUDGE PRIDGIN: MISO.

14 MR. SMALL: No, your Honor.

15 JUDGE PRIDGIN: Public Counsel.

16 MR. OPITZ: No. Thank you, Judge.

17 JUDGE PRIDGIN: Neighbors United.

18 MS. HERNANDEZ: No additional questions.

19 I just want to make sure I offered 73.

20 JUDGE PRIDGIN: I show it as offered and  
21 admitted.

22 MS. HERNANDEZ: 72 and 73?

23 JUDGE PRIDGIN: Correct.

24 MS. HERNANDEZ: Okay. Thank you.

25 JUDGE PRIDGIN: Any redirect?

1 MR. TRIPP: Yes, your Honor.

2 REDIRECT EXAMINATION BY MR. TRIPP:

3 Q. Mr. Wood, just to clarify on responses of  
4 surveys, if you'll go to Schedule CJW-01 and following  
5 the questionnaire that's for the first open house, can  
6 you find that one?

7 A. Yes.

8 Q. Okay. Following that, there's a summary  
9 the responses. Correct?

10 A. That is correct.

11 Q. And then actually it looks like on the  
12 next page there's a table that's constructed that  
13 shows that total that answered questions was 252 for  
14 that particular survey, just to clarify; is that  
15 correct?

16 A. That's correct.

17 Q. Okay. And then if you'll go to the  
18 reduced route network questionnaire. Did you find  
19 that one? And those charts show some summarized  
20 responses and it looks like between hundred and --  
21 depending on which of those answers, 154 to 160 people  
22 answered those questions; is that fair?

23 A. That's fair.

24 Q. Okay. Just in terms of who's responding.  
25 And then with regard -- because I can't locate the DR

1 response at this moment, but on a very tiny scale --  
2 and I'll try and find that in a minute, but the tiny  
3 scale there is kind of an aerial -- at least a Google  
4 map of the -- very tiny of the route itself. Correct?  
5 Right before the project questionnaire. Still in  
6 Schedule CJW-01.

7 I'm sorry. Did you answer the question?

8 A. I'm sorry. I can't find --

9 Q. Oh, it's right before the project  
10 questionnaire. It's a map --

11 A. Okay. For the first round?

12 Q. Yeah. It's right before the project  
13 questionnaire for the first round, Mr. Wood.

14 A. Okay. I think I got it.

15 Q. Okay. And it's small and we'll see if we  
16 can find a larger one here in a minute, but that's a  
17 small version of at least the Google map of the route;  
18 is that correct? Or the study area?

19 A. Yeah. The study area and the route  
20 alternatives.

21 Q. Okay. Okay. I wanted to ask you some  
22 questions, follow-up on Commissioner Hall's question  
23 about diagonal lines.

24 A. Okay.

25 Q. Okay. And you remember those questions.

1 **What was the intent in planning process with regard to**  
2 **diagonally cutting across property from the planning**  
3 **or the routing perspective?**

4 A. Well, like I mentioned before, our intent  
5 was to follow property lines, fence lines, lines of  
6 division as best we could. But unfortunately, you  
7 know, when you're running along a property line, you  
8 run into constraints like homes and forested land that  
9 potentially has Indiana bat and Conservation easements  
10 and culture resource sites and wetlands. And so it's  
11 just -- in order to avoid these constraints, to  
12 minimize the impacts of our route, we -- we often have  
13 to go diagonal.

14 **Q. Okay. And so one of the -- so is the --**  
15 **in terms of the final route, there were some route**  
16 **alternatives that you considered. In terms of the**  
17 **final route, does it have fewer diagonal intersects of**  
18 **tracts of land?**

19 A. Yes. I would say the route we selected  
20 is -- is less diagonal.

21 **Q. Now, with regard to the diagonal issue**  
22 **still, Mr. Wood, one of the issues that was -- or one**  
23 **of the concerns or issues raised was, you know,**  
24 **paralleling existing lines. You're aware of that.**  
25 **Right?**

1 A. Correct.

2 Q. And so when you looked at that, did you  
3 look at 69 KV lines in that area?

4 A. Yes, we did.

5 Q. And did those existing 69 KV lines cut  
6 diagonally across the property?

7 A. Many of them did, yes.

8 MR. TRIPP: Okay. Your Honor, may I  
9 approach the witness?

10 JUDGE PRIDGIN: Yes, you may.

11 MR. TRIPP: I didn't bring copies.

12 May I approach the witness, Your Honor?

13 JUDGE PRIDGIN: You may.

14 BY MR. TRIPP:

15 Q. Mr. Wood, I'm showing you -- I guess I  
16 need a mark on this one. Sorry.

17 JUDGE PRIDGIN: 74.

18 BY MR. TRIPP:

19 Q. This will be 74. Showing you what's been  
20 marked as Exhibit 74, can you identify that?

21 A. Yeah. It's Data Request Number NU-2-16.

22 Q. Okay. And what did they ask for?

23 A. Please provide a copy of a Google-type  
24 map for each property that is subject to the proposed  
25 line that ATXI representatives could show property



1 owners at each of the local public hearings. On each  
2 of the maps please ensure the detail includes the red  
3 and white lines indicating where the proposed line  
4 will cross along the easement sought; the green line  
5 that indicates any other electric lines on the  
6 property; as well as the parcel number for the  
7 property that appears on the screen when the image is  
8 reviewed at the local public hearings.

9 **Q. Okay. And attached to that, as best you**  
10 **can tell, you want to look at -- just briefly thumb**  
11 **through the attachments there, Mr. Wood. Attached to**  
12 **this basically are the maps that you would have**  
13 **provided on that CD. Fair enough?**

14 A. Fair enough.

15 MR. TRIPP: Your Honor, move to admit  
16 into the record Exhibit 74.

17 JUDGE PRIDGIN: 74 has been offered. Any  
18 objections?

19 Hearing none, 74 is admitted.

20 (ATXI Exhibit 74 was received into  
21 evidence.)

22 BY MR. TRIPP:

23 **Q. I want to ask you, you were asked some**  
24 **questions particularly with regard to correspondence**  
25 **from the Missouri Department of Conservation regarding**

1 **the impact of the proposed line on wooded areas. Do**  
2 **you recall those questions?**

3 A. Yes, I do.

4 **Q. What was -- was that a consideration in**  
5 **the routing process planning?**

6 A. Yes. Most definitely it was one of the  
7 considerations.

8 **Q. And when we say it's a consideration,**  
9 **what do you mean by that, Mr. Wood?**

10 A. It's -- it's one of the factors that we  
11 looked at crossing a forested land because, you know,  
12 we were aware of Indiana bat habitat.

13 **Q. All right. And when -- in that -- do you**  
14 **have that exhibit in front of you, Exhibit 72? It's**  
15 **the Data Request 8-6 response.**

16 A. I do.

17 **Q. Okay. And in that letter -- that**  
18 **November 21st, 2014 letter from the Department of**  
19 **Conservation, they identified several fragmentation**  
20 **areas -- or areas they believe might be fragmented by**  
21 **the line?**

22 A. That's correct.

23 **Q. Okay. So does this include areas just**  
24 **for the final route or was it for more than that?**

25 A. It was for more than that.

1           **Q.     And when we say "more than that," what do**  
2 **you mean?**

3           A.     It means for the reduced route network,  
4 which was comprised of basically a north and south and  
5 then the -- the routes between Zachary and the state  
6 line.

7           **Q.     Do some of these parcels fall within**  
8 **where the final route is?**

9           A.     Yes.

10          **Q.     All right.**

11          MR. TRIPP: May I approach, Your Honor?

12          JUDGE PRIDGIN: You may.

13          MR. TRIPP: I need to -- next exhibit is?

14          JUDGE PRIDGIN: 75.

15          (ATXI Exhibit 75 was marked for  
16 identification.)

17          BY MR. TRIPP:

18          **Q.     Mr. Wood, I'm handing you what's been**  
19 **marked as Exhibit 75. Can you identify that, please?**

20          A.     Yes. It's -- just say it's Exhibit 75?

21          **Q.     What is it?**

22          A.     Oh, it is -- it shows the crossing of  
23 each of these forested blocks along the selected  
24 route.

25          **Q.     And are these the blocks that are**

1 **actually mentioned in that letter that actually fall**  
2 **within the final route?**

3 A. Yes, they are.

4 **Q. All right. And so I think what the**  
5 **questions -- or what the letter had do with was**  
6 **concerns about fragmenting these forested areas in**  
7 **these parcels; is that right?**

8 A. Yeah. It was crossing of forested blocks  
9 over 150 acres.

10 MR. TRIPP: I'm sorry, Judge. How do  
11 I --

12 MR. LOWERY: I can. I can do it.

13 JUDGE PRIDGIN: Thank you, Mr. Lowery.

14 MR. LOWERY: I think. I feel under a lot  
15 of pressure right now.

16 BY MR. TRIPP:

17 **Q. That's a little dark. Maybe -- well,**  
18 **there we go.**

19 **So what you did, as I understand it,**  
20 **Mr. Wood, is you identified those parcels where the**  
21 **final line went through that the Department of**  
22 **Conservation was concerned about fragmentation?**

23 A. Yeah. Identified the sections, correct.

24 **Q. The sections. Sorry. And so this first**  
25 **one are you able to just -- you can use the screen if**

1 **it helps or --**

2 A. Can I stand or --

3 **Q. Yes.**

4 MR. TRIPP: Judge, may he have permission  
5 to use that?

6 JUDGE PRIDGIN: Sure.

7 BY MR. TRIPP:

8 **Q. Go ahead and stand, Mr. Wood.**

9 A. Okay.

10 **Q. And explain what -- first of all, what**  
11 **we're looking at and what the concern is.**

12 A. Well, the outer boundary, this black line  
13 (indicating) represents the sections that were  
14 indicated by the Department of Conservation. And I  
15 just want to -- the red line indicates our route.  
16 What I want to point out is habitat fragmentation,  
17 they're saying 1,200 acres. But, you know, right here  
18 you can see there's a clearing here so I could argue  
19 that that's already fragmented over here. And so the  
20 fragmentation would occur just down here (indicating)  
21 and the rest of this would be unaffected.

22 **Q. And Mr. Wood, if you wouldn't mind**  
23 **stepping to the other side so the Commissioners --**

24 A. Sorry.

25 **Q. -- could see what you're talking about as**

1 well. And so --

2 A. Although they're saying 1,200 acres,  
3 because they've highlighted all these sections, you  
4 know, we're only crossing down here at the south end.  
5 So we're -- you know, we're not affecting this  
6 northern part of the forested block.

7 Q. Okay. And then the next one.

8 A. I would argue -- these are really narrow  
9 areas. I would argue that that's not forest  
10 fragmentation.

11 Q. Or at least it's at the very edge?

12 A. It's at the -- yeah, it's very -- real  
13 thin areas. And again, it's at the very edge. The  
14 rest of this remains intact.

15 Q. Okay. This next one?

16 A. I mean, I would say yes, this -- a  
17 portion of this is fragmented, this northern part  
18 here. But again the remainder of this is unaffected.

19 Q. And so let me ask you this: In terms of  
20 especially going through northeast Missouri, if you're  
21 running a transmission line, are you able to  
22 100 percent avoid forested areas?

23 A. It's -- no. It's very difficult.

24 Q. Okay. And when you do re-route it or  
25 change the route to go around a forested area, are

1 **there other concerns that arise?**

2 A. Yeah. I mean, there could be other  
3 concerns, yes. It could be wetlands and culture  
4 resource sites and new property owners and new -- you  
5 know, it's a whole -- we don't know, you know, what --  
6 so it would be a pretty big, you know, modification to  
7 avoid that. And we don't know if there indeed is  
8 Indiana bat there unless -- until it's surveyed.

9 **Q. Okay. This site -- I turned the page on**  
10 **you while you were talking. This is another one of**  
11 **those sections?**

12 A. Even -- I would agree here that there's  
13 forest fragmentation. But again, you know, a large  
14 section of this would remain intact and it would just  
15 affect the southern portion of that forested block.

16 **Q. And in terms of the total acreage**  
17 **mentioned in that November 2014 letter in terms of**  
18 **what we're actually seeing on the final route, are**  
19 **they different numbers in terms of the number of**  
20 **acres impacted?**

21 A. Well, I think what they indicated is just  
22 that these are -- this large of forested block. I  
23 don't know that they indicated that we would  
24 necessarily impact it. But there -- they said that we  
25 would -- our route was more -- crossed more forested

1 blocks.

2 **Q. Okay. And this next one? I turned the**  
3 **page there.**

4 A. I would argue again you've got a clearing  
5 right here and here that -- that you're at the edge  
6 that I would argue I don't know that that's forest  
7 fragmentation.

8 **Q. And then this is the final one here, I**  
9 **think. Well, no, second-to-last.**

10 A. It's a little hard to see, but I believe  
11 based on my memory there was -- it's just this portion  
12 right here (indicating). Again, it's -- it's at the  
13 southern end and you're going to -- the northern end  
14 is unaffected. And just -- so it would be just a  
15 small portion that would be fragmented.

16 **Q. Okay. And then this is the final one.**

17 A. Again, we're near the -- near the edge  
18 again. It would just be this -- if you call that  
19 fragmentation, it would just be this -- you know, I  
20 consider, you know, going right through the middle of  
21 that a lot more impacting and more fragmentation, but  
22 we are -- we're leaving the rest of that intact.

23 **Q. Okay. Thank you. You can return to**  
24 **the --**

25 A. Thank you.



1           **Q.     That letter, Mr. Wood, also mentions**  
2 **records of the Indiana bat and one of the other bat**  
3 **species.   Correct?**

4           A.     That's correct.

5           **Q.     Actually both of those letters that you**  
6 **were shown in Exhibit 72 and 73 both mention bat**  
7 **species.   Correct?**

8           A.     Yes.   Correct.

9           **Q.     Of the places where they identified where**  
10 **they had records of bats, does the final route go**  
11 **through any -- or what's the closest that the final**  
12 **route would go to near where you had or observed or**  
13 **were told about a sighting of a bat?**

14          A.     Based on the Missouri Department of  
15 Conservation Natural Heritage Review, they listed a  
16 number of sections where there's occurrences of  
17 Indiana bat.   We do not cross any of those  
18 occurrences.   Each occurrence they just give you the  
19 section.   And I believe of those, there's just one  
20 area where we're maybe within a mile, mile and a half  
21 from an occurrence.

22          **Q.     Was there a recommendation for a**  
23 **different route because of bat species?   Any specific**  
24 **other route they said you should take?**

25          A.     No.    The Fish and Wildlife Service did

1 not rec-- recommend a route based on the Indiana bat  
2 or any other bat species.

3 **Q. All right. Just have one last set of**  
4 **questions here. Oh, and just so we're clear, so with**  
5 **regard to any interaction between particularly US Fish**  
6 **and Wildlife and Missouri Department of Conservation,**  
7 **was that actually Burns and McDonnell's responsibility**  
8 **or ATXI's responsibility?**

9 A. That was ATXI's responsibility.

10 **Q. And which witness should the Commission,**  
11 **if they have any questions, be able to ask about that?**

12 A. Jim Jontry.

13 MR. TRIPP: All right. I don't have any  
14 other questions of this witness, Your Honor.

15 JUDGE PRIDGIN: Mr. Tripp, thank you.  
16 Mr. Chairman, you have a couple questions?

17 FURTHER QUESTIONS BY CHAIRMAN HALL:

18 **Q. Yeah. I apologize. You -- I don't**  
19 **remember the exact number, but you said you had**  
20 **400-and-some questionnaire responses. I was just**  
21 **wondering if you had any responses from any member of**  
22 **the Amish or Mennonite community or do you have any**  
23 **way of knowing?**

24 A. We might be able to crosscheck that. If  
25 there's some of the names that we know that are Amish,

1 we could look that up.

2 **Q. And I mean I guess the reason why I ask**  
3 **is, is it was my understanding from some testimony at**  
4 **local public hearings that those individuals were not**  
5 **taking part in the -- in the -- in the process.**

6 A. We do have a record of them. They did  
7 sit down at our computer stations and provide comment.  
8 And I'll -- actually provided a conservative estimate  
9 of the location of the Amish property that we had. So  
10 we did -- we did get input from them.

11 **Q. A representative sample do you think**  
12 **or -- or any idea? Any way of knowing?**

13 A. It was -- it was Hagston and Bishop --  
14 Bishop Schwartz (phonetic spellings), I believe were  
15 the -- the two that provided the comments that -- and  
16 Mr. Hagston represents -- I guess he says that he  
17 represents the Amish.

18 **Q. Did you make any efforts to avoid those**  
19 **communities beyond your -- your efforts to avoid**  
20 **residential -- residences and prime farmland and**  
21 **the -- the other criteria that you outlined? Was**  
22 **there anything specific that was involved in setting**  
23 **this -- this site that took into consideration the**  
24 **Amish and Mennonite communities?**

25 A. I would say that, you know, as part of

1 our process, we try to minimize distance from  
2 residences, you know, we try to minimize impacts to  
3 crop land. And -- and so in a way, you know, we're --  
4 we're trying to minimize impacts to everybody,  
5 including the Amish.

6 **Q. So you treated -- from your perspective,**  
7 **you treated them the same way you treated everybody**  
8 **else in -- in -- in that area?**

9 A. I mean, I -- we did take into  
10 consideration their comments and we did pick a route  
11 that we believe was less impacting to the Amish and  
12 that was something we -- we talked about. So I do  
13 believe we took their comments into consideration. If  
14 you look -- if -- if it's okay, can I refer to --

15 **Q. Absolutely.**

16 A. -- my Surrebuttal Testimony? If you go  
17 to Schedule CJW-SR1.

18 **Q. You don't have it either?**

19 A. Do you want --

20 COMMISSIONER KENNEY: Is it in your  
21 Surrebuttal?

22 THE WITNESS: Yeah.

23 MR. TRIPP: May I approach? Here you go.

24 THE WITNESS: Actually it looks like that  
25 (indicating).

1 BY CHAIRMAN HALL:

2 Q. How far into the --

3 A. It's the first one. It's the first  
4 schedule.

5 Q. Okay.

6 A. And the route we selected is the one to  
7 the east. And as you can see, we avoided a really  
8 large section of the Amish and Mennonite area that was  
9 provided to us from -- at the open houses. The -- the  
10 other route was the route we did not select that I  
11 would say is -- is more impacting.

12 And then we also were provided surnames  
13 of Amish folks and we mapped those. And that would be  
14 my Schedules CJW-SR4 and 5. And we -- which shows  
15 that we actually cross less properties and are  
16 adjacent to less properties than the other routes. So  
17 I mean, I think we picked a route that was less  
18 impacting to the Amish and we did consider their --  
19 their feedback.

20 Q. Okay. Thank you.

21 A. You're welcome.

22 JUDGE PRIDGIN: Commissioner Stoll?

23 COMMISSIONER STOLL: I just have one  
24 question. On Exhibit 74, the information contained in  
25 that, is that the information that Commissioner Kenney

1 was asking about, the aerial view and -- of each  
2 property? Could we access that electronically?

3 MR. LOWERY: We'll get -- we'll get you  
4 an electronic file. It might be multiple PDFs because  
5 it may be pretty large, but we can get it to you  
6 electronically. And we'll have to get additional  
7 copies as well. We didn't anticipate that being an  
8 exhibit, but we'll get that for you.

9 COMMISSIONER STOLL: That would be great.  
10 Save some paper and that will be a good way to look at  
11 those properties. Thank you.

12 MR. LOWERY: Your Honor, let me ask you  
13 that question. Do we need to get it all in paper or  
14 can we just provide it electronically?

15 JUDGE PRIDGIN: I have no problem with  
16 electronic --

17 MR. LOWERY: Thank you.

18 JUDGE PRIDGIN: -- as long as it doesn't  
19 bother any other counsel.

20 MS. HERNANDEZ: I would just -- I don't  
21 know if -- if it's going to be used in any way, it has  
22 a copyright so I don't know if that can be -- I don't  
23 know what that means in terms of using it.

24 MR. LOWERY: I'm not a copyright lawyer,  
25 but I think this probably falls within the Fair Use

1 Doctrine and we'll -- I guess we'll deal with that if  
2 it needs to, but I don't think it's going to be an  
3 issue.

4 COMMISSIONER STOLL: I'll erase it when  
5 I'm finished.

6 MR. LOWERY: Thank you, Commissioner. We  
7 don't want to get into trouble with the intellectual  
8 property lawyers.

9 JUDGE PRIDGIN: Any further Bench  
10 questions? Recross based on Bench questions. Staff.

11 MR. WILLIAMS: No, thank you.

12 JUDGE PRIDGIN: MISO.

13 MR. SMALL: No, Your Honor.

14 JUDGE PRIDGIN: Public Counsel?

15 MR. OPITZ: No, thank you, Judge.

16 JUDGE PRIDGIN: Neighbors United.

17 MS. HERNANDEZ: No, thank you.

18 JUDGE PRIDGIN: Redirect.

19 FURTHER REDIRECT EXAMINATION BY MR. TRIPP:

20 **Q. Just one other question about your**  
21 **schedules. There's a schedule SR-3 to your**  
22 **Surrebuttal. And what is that -- what does that set**  
23 **out?**

24 A. It talks about describe the work that we  
25 did to identify the location of Amish and Mennonite

1 communi ties.

2 **Q. All right. And then -- and just wanted**  
3 **to clarify. So at the time you had two -- or I guess**  
4 **you had more than two possible routes on the north --**  
5 **from Zachary to State line; is that correct?**

6 A. Yeah. We had two.

7 **Q. Two?**

8 A. Well, technically four.

9 **Q. That's what I thought. We had**  
10 **technically four, but two initial ones. And the route**  
11 **we selected was the one that had the least impact on**  
12 **the Amish?**

13 A. Yes. I believe so.

14 **Q. All right. Thank you.**

15 MR. TRIPP: No other questions, Your  
16 Honor.

17 JUDGE PRIDGIN: All right. Thank you.

18 Commissioner Coleman, I'm sorry. I think  
19 we're about to take a break. I know you just got  
20 back.

21 COMMISSIONER COLEMAN: Perfect.

22 JUDGE PRIDGIN: You timed it very well.

23 I've got the next witness appears to be  
24 Mr. Endorf and then Mr. Hackman; is that correct?

25 MR. LOWERY: Yes, Your Honor.



1 JUDGE PRIDGIN: Anything further from  
2 counsel before we go take a break?

3 All right. Hearing nothing, we'll stand  
4 in recess until 3:10. Thank you. We're off the  
5 record.

6 (ATXI Exhibit 74 was marked for  
7 identification.)

8 JUDGE PRIDGIN: We are back on the  
9 record. And I believe we are ready for Mr. Endorf's  
10 testimony. Anything further from counsel before we  
11 proceed?

12 All right. Mr. Endorf, if you'll raise  
13 your right hand to be sworn, please.

14 (Witness sworn.)

15 JUDGE PRIDGIN: Thank you very much sir.  
16 And Mr. Dearmont, when you're ready, sir.

17 MR. DEARMONT: Very good. Thank you.

18 DAVID ENDORF, testified as follows:

19 DIRECT EXAMINATION BY MR. DEARMONT:

20 Q. Good afternoon. How are you?

21 A. Good.

22 Q. Could you please identify yourself for  
23 the record?

24 A. My name is David Endorf.

25 Q. By whom are you employed, Mr. Endorf?

1 A. Ameren Services.

2 Q. **And what's your position or title?**

3 A. Principal engineer in the transmission  
4 performance management and engineering department.

5 Q. **Very good. You're the same David Endorf  
6 who prepared and caused to be filed certain Direct  
7 Testimony identified as ATXI Exhibit 13. Correct?**

8 A. Yes.

9 Q. **That testimony contained three schedules,  
10 DE-01, DE-02 and DE-03. Correct?**

11 A. Correct.

12 Q. **Do you have any corrections to your  
13 Direct Testimony?**

14 A. No.

15 Q. **Is all of the information contained  
16 therein true and accurate to the best of your  
17 knowledge, information and belief?**

18 A. Yes.

19 Q. **Okay. And if asked the same questions  
20 today as were contained in your Direct Testimony,  
21 would your answers be the same?**

22 A. Yes.

23 Q. **And are you the same David Endorf who  
24 prepared and caused to be filed certain Direct  
25 Testimony labeled as ATXI Exhibit 14?**

1 A. Yes.

2 Q. And that testimony referenced one  
3 schedule labeled DE-SR-1. Correct?

4 A. Correct.

5 Q. Do you have any corrections to your  
6 Surrebuttal Testimony?

7 A. No.

8 Q. Is all of the information contained  
9 therein true and accurate to the best of your  
10 knowledge, information and belief?

11 A. Yes.

12 Q. And if asked the same questions today as  
13 were contained therein, would your answers be the  
14 same?

15 A. Yes.

16 Q. Very good, Mr. Endorf.

17 MR. DEARMONT: I have no further  
18 questions. I would move for the admission of ATXI  
19 Exhibits 13 and 14 and tender Mr. Endorf for  
20 cross-examination.

21 JUDGE PRIDGIN: All right. Thank you.  
22 Any objections?

23 Hearing none, 13 and 14 are admitted.

24 (ATXI Exhibits 13 and 14 were received  
25 into evidence.)

1 JUDGE PRIDGIN: Cross-examination for  
2 Staff.

3 MS. MYERS: No questions, Your Honor.

4 JUDGE PRIDGIN: MISO.

5 MR. SMALL: No questions, Your Honor.

6 JUDGE PRIDGIN: Public Counsel.

7 MR. OPITZ: No questions, Your Honor.

8 JUDGE PRIDGIN: Neighbors United.

9 MS. HERNANDEZ: A few. Thank you.

10 CROSS-EXAMINATION BY MS. HERNANDEZ:

11 Q. Mr. Endorf -- I keep sliding one way or  
12 the other. A few questions. If you agree with the  
13 Mark Twain transmission project, you will erect poles  
14 on landowners' property. Correct?

15 A. Correct.

16 Q. And for each pole of the Mark Twain  
17 transmission project, you will pour foundation on the  
18 land. Correct?

19 A. Correct.

20 Q. And for each pole of the Mark Twain  
21 transmission project, you will engage in construction  
22 activities on the land associated with pouring the  
23 foundation and erecting the pole?

24 A. Correct.

25 Q. Is it your understanding that some of the

1 **land the proposed Mark Twain transmission crosses is**  
2 **used for farming?**

3 A. Yes.

4 **Q. And is it your understanding that some of**  
5 **the land the Mark Twain transmission project crosses**  
6 **is used for ranching?**

7 A. Yes.

8 **Q. And do you agree that some amount of**  
9 **agricultural or ranching land will be taken out of**  
10 **production with the Mark Twain transmission project?**

11 A. Yes.

12 MS. HERNANDEZ: That's all the questions  
13 I have. Thank you.

14 JUDGE PRIDGIN: All right. Thank you.

15 Any Bench questions? Mr. Chairman.

16 QUESTIONS BY CHAIRMAN HALL:

17 **Q. Good afternoon.**

18 A. Good afternoon.

19 **Q. I'm not sure if you're the right person**  
20 **to ask this, but if not, we'll find out quickly. Is**  
21 **it -- is it possible to bury transmission lines?**

22 A. I'm not the correct person. Jeff Hackman  
23 who is right after me will be glad to answer that  
24 question.

25 **Q. All right. Thank you.**

1 A. Thank you.

2 COMMISSIONER STOLL: I have no questions.  
3 Thank you for your testimony.

4 JUDGE PRIDGIN: Commissioner Kenney?  
5 All right. Redirect.

6 REDIRECT EXAMINATION BY MR. DEARMONT:

7 Q. I do have just a few questions,  
8 Mr. Endorf. Thank you.

9 You were asked a few questions about, I  
10 guess, construction activity and poles. Do you  
11 remember those?

12 A. Yes.

13 Q. Okay. And one of the questions was  
14 asking you to confirm whether or not ATXI's proposed  
15 installation of structures would take farming or  
16 ranching land out of production. Do you remember that  
17 question?

18 A. Yes.

19 Q. And your answer was yes, it would?

20 A. Yes.

21 Q. Okay. Based on your calculations,  
22 approximately how much ag or ranch land will be taken  
23 out of production?

24 A. I believe the ag land out of production  
25 would be less than one acre.

1           **Q.     Let's -- let's talk about poles for a**  
2 **while here. And I want to ask you some questions**  
3 **about what I'm going to call the common family of**  
4 **poles. Okay? Do you understand kind of what I mean?**  
5 **We'll talk about tangents and light angles and medium**  
6 **angles.**

7           A.     Okay.

8           **Q.     Do you follow me so far?**

9           A.     Yeah.

10          **Q.     Okay. What's a tangent structure?**

11          A.     A tangent structure is an in-line  
12 structure. It basically holds the wires up. The  
13 wires are not dead-ended on that structure.

14          **Q.     I'm going to put it in my terms. It's**  
15 **for use when the line is going straight?**

16          A.     Correct.

17          **Q.     Okay. Now, at the other end of the**  
18 **structure spectrum we have -- well, you tell me.**  
19 **What's at the other end?**

20          A.     Okay. In between the tangent structure  
21 or the in-line, as we call it, then there would be a  
22 light angle structure where it would turn a line angle  
23 of say zero to 15 degrees; medium angle, 15 to 30;  
24 medium/heavy, 30 to 45, 45 to 60, 60 to 90. So your  
25 90-degree structure, the line turns a 90-degree

1 corner. That's -- that's the extreme from a tangent  
2 as far as the heavy structure.

3 **Q. Okay. So let's talk about the spectrum**  
4 **here. We have what I'll call an in-line tangent on**  
5 **the low end of the spectrum. Right?**

6 A. Right.

7 **Q. And on the other end, like a hard angle**  
8 **90?**

9 A. Correct.

10 **Q. Okay. And sometimes those are referred**  
11 **to as dead-ends?**

12 A. Yes.

13 **Q. Okay. What does dead-end mean?**

14 A. The wires are dead-ended on the  
15 structure. They're connected to insulators and they  
16 would basically be horizontal on the structure. On a  
17 tangent structure, you'll see that the insulators hang  
18 vertical and that's one way to know it's a tangent  
19 structure.

20 **Q. The way that you attach the wires so that**  
21 **the structure doesn't get pulled over or something?**

22 A. Correct.

23 **Q. Let's talk about cost. I think there**  
24 **were some questions from the Bench earlier that were**  
25 **appropriately deferred to you. Were you here for**



1 **that?**

2 A. Right. Uh-huh.

3 **Q. So again, looking at this spectrum of**  
4 **structures here, let's talk about just steel. What --**  
5 **ball park for me the cost of an in-line tangent just**  
6 **talking steel.**

7 A. In-line tangent structure would be around  
8 \$25,000.

9 **Q. Steel?**

10 A. Steel, correct.

11 **Q. Other end of the spectrum, dead-end 90.**

12 A. Probably clos-- closer to \$100,000 for  
13 the structure.

14 **Q. Okay. How about installed engineered,**  
15 **constructed costs in-line 90 -- or I'm sorry, in-line**  
16 **tangent?**

17 A. They would probably be similar. I don't  
18 have the exact dollars, but it would be in the similar  
19 ball park of a four times -- possibly four times as  
20 much. Basically because the foundation for the  
21 dead-end structure is very expensive.

22 **Q. Okay. Why? Why is it more expensive?**

23 A. Because it has more load on it. The  
24 wires are dead-ended on that structure and it causes a  
25 bigger -- bigger moment on the structure. And the

1 foundation is designed to take that moment. So on a  
2 dead-end structure, we'd probably end up with a  
3 10-foot diameter foundation, so many feet deep  
4 depending on the soil characteristics.

5 **Q. But at the end of the day, by the time**  
6 **it's all said and done, by order of magnitude a**  
7 **dead-end 90 could be upwards of four times as**  
8 **expensive as an in-line tangent?**

9 A. Yes.

10 **Q. And over 600 structures, I think it's**  
11 **probably safe to say that adds up?**

12 A. Yes.

13 **Q. No further questions.**

14 JUDGE PRIDGIN: Thank you. Mr. Endorf,  
15 thank you very much. You may step down.

16 And I believe Mr. Hackman is next. If  
17 you'll raise your right hand to be sworn, sir.

18 (Witness sworn.)

19 JUDGE PRIDGIN: Thank you very much, sir.  
20 And Mr. Dearmont.

21 MR. DEARMONT: Very good.

22 JEFFREY HACKMAN, testified as follows:

23 DIRECT EXAMINATION BY MR. DEARMONT:

24 **Q. Thank you. Good afternoon. Can you**  
25 **please identify yourself?**

1 A. I'm Jeffrey Hackman.

2 Q. Mr. Hackman, by whom are you employed and  
3 in what capacity?

4 A. Ameren Services Company. And I'm the  
5 senior director of project management and  
6 construction.

7 Q. Are you the same Jeffrey Hackman who  
8 prepared and caused to be filed certain Surrebuttal  
9 Testimony that has been identified as ATXI Exhibit 11?

10 A. Yes. I didn't keep track of the exhibit  
11 numbers, but that's me.

12 Q. Subject to check. Very good. Thank you.  
13 Do you have any corrections to that testimony?

14 A. I do not.

15 Q. Is all of the information contained  
16 therein true and accurate to the best of your  
17 information, knowledge and belief?

18 A. Yes, it is.

19 Q. And if asked the same questions today as  
20 were contained in your Surrebuttal Testimony, would  
21 your answers be the same?

22 A. Yes, it would.

23 MR. DEARMONT: I have no further  
24 questions. I would move for the admission of ATXI  
25 Exhibit 11 subject to Mr. Hackman's cross-examination.

1 JUDGE PRIDGIN: Thank you. Exhibit 11 is  
2 offered. Any objections?

3 Hearing none, Exhibit 11 is admitted.  
4 (ATXI Exhibit 11 was received into  
5 evidence.)

6 JUDGE PRIDGIN: Cross-examination from  
7 Staff.

8 MS. MYERS: No questions, Your Honor.

9 JUDGE PRIDGIN: Thank you. MISD.

10 MR. SMALL: No questions, Your Honor.

11 JUDGE PRIDGIN: Public Counsel.

12 MR. OPITZ: No questions, Judge.

13 JUDGE PRIDGIN: Neighbors United.

14 MS. HERNANDEZ: Yes. Thank you. A few.

15 CROSS-EXAMINATION BY MS. HERNANDEZ:

16 Q. Good afternoon, Mr. Hackman.

17 A. Good afternoon.

18 Q. Do you have your Surrebuttal Testimony in  
19 front of you?

20 A. Yes, ma'am.

21 Q. Could you turn to page 2, line 9 through  
22 11, please.

23 A. Thank you. I have it.

24 Q. Okay. And you state there that, To the  
25 extent that there are other transmission lines in

1 northeast Missouri, they are -- they are all owned by  
2 other transmission providers and, as I understand it,  
3 they have no legal obligation or even the right to  
4 allow ATXI to use their rights for ATXI's line.

5 Did I read that correctly?

6 A. Yes, ma'am.

7 Q. Okay. You're not an attorney. Correct?

8 A. No, ma'am.

9 Q. Okay. And did you speak to any other  
10 electric providers in northeast Missouri to determine  
11 whether you could use their right-of-way or any  
12 portion of their right-of-way?

13 A. I did not speak to any providers.

14 Q. Okay.

15 MS. HERNANDEZ: May I approach?

16 JUDGE PRIDGIN: You may.

17 (NU Exhibit 76 was marked for  
18 identification.)

19 BY MS. HERNANDEZ:

20 Q. I'm handing you what's been marked  
21 Exhibit 76. Do you recognize this document?

22 A. Yes, ma'am.

23 Q. And this is your response to DR-0057 that  
24 Staff submitted to ATXI. Correct?

25 A. Yes, ma'am.

1           **Q.     Okay.  And the question from Staff to you**  
2 **was, Please identify and explain all issues, problems**  
3 **that would result from running the Mark Twain line**  
4 **parallel to or in the same right-of-way as existing**  
5 **161 KV lines in northeastern Missouri.  What**  
6 **additional equipment, slash, shielding would be**  
7 **required if the Mark Twain line ran parallel to**  
8 **existing 161 KV transmission lines.**

9           **Did I read that correctly?**

10          A.     Yes, ma'am.  I didn't check you word for  
11 word, but I think that's right.

12          **Q.     And nowhere in your response do you state**  
13 **that running the proposed Mark Twain transmission**  
14 **project parallel to the existing 161 KV line is**  
15 **impossible.  Correct?**

16          A.     No.  That's correct.  I did not say it  
17 was impossible.

18          **Q.     Okay.  In fact, your response states, A**  
19 **detailed engineering analysis would be required to**  
20 **identify additional equipment or shielding that would**  
21 **be required if the lines are parallel.  Correct?**

22          A.     That is correct.

23          **Q.     And did you do this analysis or -- let me**  
24 **rephrase that question.**

25               **And you did not do that analysis.**

1 **Correct?**

2 A. No.

3 Q. **In your Surrebuttal, page 3, lines 22**  
4 **through 23, please.**

5 A. I have it, I believe.

6 Q. **And then continuing through page 4, lines**  
7 **1 through 2. You state, Increasing the number of**  
8 **poles not only substantially increases costs, but it**  
9 **creates more impact on the underlying lands because**  
10 **for every additional pole, there must -- we must pour**  
11 **an additional foundation and engage in the**  
12 **construction activities on the land associated with**  
13 **pouring foundation and erecting the pole.**

14 **Did I read that correctly?**

15 A. Yes, ma'am.

16 Q. **And with the Mark Twain transmission**  
17 **project, do you agree that you're going to erect poles**  
18 **on landowners' property. Correct?**

19 A. Correct.

20 Q. **And you'll pour foundation for each pole?**

21 A. Correct.

22 Q. **And for each pole, you're going to engage**  
23 **in some construction activities on that land**  
24 **associated with pouring that foundation and erecting**  
25 **the pole. Correct?**

1 A. Correct.

2 Q. **And as with the parallel example in your**  
3 **testimony, the Mark Twain transmission project will**  
4 **also have an impact on the underlying lands. Correct?**

5 A. Well, you're comparing my testimony,  
6 which was talking about the increased number of poles  
7 which would be required to -- to minimize the amount  
8 of blow-out to the general condition. But I mean,  
9 certainly for every pole we construct, that would be  
10 true, but they're not comparable like you've described  
11 in your question.

12 Q. **Okay. I guess I understand what you're**  
13 **saying and --**

14 A. For every pole there will be some impact,  
15 yes, ma'am, if that's what you were asking. But  
16 they're not comparable like your question said.

17 Q. **Okay. Fair enough. And it's your**  
18 **understanding that some of the land the proposed Mark**  
19 **Twain transmission project crosses is used for**  
20 **farming. Correct?**

21 A. Yes, ma'am.

22 Q. **And it's your understanding that some of**  
23 **land that this proposed line crosses is used for**  
24 **ranching. Correct?**

25 A. Yes, ma'am.



1           **Q.     And would you agree that you did not**  
2 **conduct an analysis of the increased costs at page 3**  
3 **and 4 of your Surrebuttal compared to the cost of the**  
4 **Mark Twain transmission project crossing farming land.**  
5 **Correct?**

6           A.     Again, ma'am, you're mischaracterizing  
7 pages 3 and 4. Three and 4 are describing the case  
8 where you would try to build on a reduced right-of-way  
9 and in order to make sure that the conductors did not  
10 move outside of that right-of-way, you would have to  
11 install additional structures to reduce the span  
12 lengths.

13                     That topic, which we're talking about,  
14 isn't in any way related to the other thing you said  
15 in your question. So I mean, it's -- it's not an  
16 apples and oranges question. It's an apples and, you  
17 know, buildings question.

18           **Q.     But I guess the question is you didn't --**  
19 **you didn't conduct an analysis on running the line**  
20 **parallel. Correct?**

21           A.     I -- no, I mean I don't know what --  
22 again, the -- if we ran it honestly just parallel, we  
23 would -- the only -- well, there would be a lot of  
24 factors different, but I -- no, we didn't.

25           **Q.     So looking at page 3 of your Surrebuttal,**

1 **lines 22 to 23 continuing on page 4 -- lines 1 and**  
2 **2 --**

3 A. Uh-huh.

4 **Q. -- you speak there to the number of poles**  
5 **and how -- speaking to your claim, substantially**  
6 **increase costs. Correct?**

7 A. Ma'am, we're talking about where we would  
8 reduce the nominal width of the right-of-way from  
9 150 feet to something less. And when we do that, it  
10 would require more structures than we would currently  
11 plan on putting in because we would have to confine  
12 the wires from moving further out. And so you have to  
13 shorten the spans so they can't blow out as far.

14 **Q. No, I understand.**

15 A. And so if you shorten the spans, that  
16 means more poles, more structures, more additional  
17 costs. That's what those sections are talking about.

18 **Q. Right. But that's an existing**  
19 **right-of-way. Correct?**

20 A. It has nothing to do with right-of-ways,  
21 ma'am. I'm talking about the generic case where  
22 you're reducing the right-of-way width.

23 **Q. Okay. Okay. I have no further**  
24 **questions. Thank you.**

25 JUDGE PRIDGIN: All right. Thank you.

1                   Bench questions, Mr. Chairman.

2       QUESTIONS BY CHAIRMAN HALL:

3                   **Q.     Yeah, good afternoon.**

4                   A.     Good afternoon, Chairman. I'm anxious  
5       for our question.

6                   **Q.     So is it possible to bury a transmission**  
7       **line?**

8                   A.     It absolutely is possible, yes, sir.

9                   **Q.     And are there any transmission lines in**  
10       **this country that are buried?**

11                  A.     Yes, there are.

12                  **Q.     Are there any in the state of Missouri?**

13                  A.     I don't know of any.

14                  **Q.     Okay. What is the relative cost to bury**  
15       **a transmission line versus putting it on -- on towers?**

16                  A.     It's usually a range because it depends  
17       on the length and the capacity of the circuit. But a  
18       general rule of thumb is ten -- ten times as much. It  
19       can go as low as six -- I've seen some projects where  
20       it's about a six times multiplier and I've seen  
21       some -- there's a Minnesota project, a MISO project  
22       that was 20 times greater.

23                  **Q.     And what is the reason for that increased**  
24       **cost?**

25                  A.     The -- the in an overhead conductor, the

1 air is the insulation. You know, so the electricity  
2 doesn't jump to anything. We use the air. If you --  
3 if you want to put it in the ground, you have to keep  
4 the electricity from jumping off into the ground,  
5 which it would want to do.

6 So you have to put in an insulating  
7 mechanism like a cable on an extension cord. You  
8 know, there's a wire inside and then there's a rubber  
9 sheath around it. That rubber sheath is the  
10 insulation. And that insulation is very, very  
11 expensive as the voltages are increased.

12 So while it's very easy and relatively  
13 inexpensive to underground distribution circuits, the  
14 cost is not a straight line. When you increase the  
15 voltage, it goes more like this (indicating). At  
16 vol -- at very high voltages like this, extra high  
17 voltages was what the 345 KV class is, you know, the  
18 performance of the electricity starts to look like  
19 lightning. And so the insulation has to be very, very  
20 good.

21 **Q. So even though you would be able to avoid**  
22 **the cost of the towers and -- and the foundation, it's**  
23 **the cost to install this insulation that -- that makes**  
24 **it between six and ten times as expensive?**

25 A. Right. So if we -- I -- if we have a

1 200 million dollar line for Mark Twain, plus or minus,  
2 it would probably be a minimum of 1.2 billion to  
3 construct that same line. The property rights would  
4 still be there, you know, the landowners would -- we  
5 wouldn't need 150 foot of width, but we'd still need a  
6 fairly substantial easement, you know, so that we  
7 could access the structure, do inspections and those  
8 sorts of things, conduct cathodic protection.

9 **Q. Is it possible to bury small sections**  
10 **like if --**

11 A. That's not -- I mean anything is  
12 possible, Chairman. I would be lying if I said it's  
13 not possible. It's ill-advised because when  
14 electricity changes -- when it's flowing down a  
15 conductor and it changes either the -- the size of the  
16 conductor or the kind of conductor, part of the  
17 electricity is reflected back. It's called a  
18 reflective wave.

19 And so -- I know this is very complex.  
20 I'll try to make it simple for you, but if we're  
21 sending 2-- and I don't mean that you can't understand  
22 it, but --

23 **Q. I --**

24 A. -- I'm trying to just do it so we can get  
25 it in the record.

1           **Q.     I appreciate those efforts.**

2           A.     So if -- if we have 200 -- I'm just  
3 making this -- let's make a number we're not using --  
4 150 volts coming down. If we change the conductor  
5 size or characteristics, even just change the kind of  
6 conductor, some of it reflects back.

7                     In the case where you actually just stop  
8 the conductor and left it open, you'd have 200 volts  
9 that came in and then 200 volts that would go back and  
10 you actually -- at that point you actually have  
11 400 volts that's applied across that structure. So  
12 you have a doubling problem and that -- that is very  
13 hard on the insulation of the -- of the wire.

14                    So when we go from overhead to  
15 underground, that's a significant characteristic  
16 change in that impedance of that wire. So you get a  
17 tremendous reflection back. And that reflection, if  
18 it's doubled, we are now approaching lightning  
19 voltages on this conductor. So the lightning  
20 arresters will have a hard time telling the difference  
21 whether they should shunt the electricity to the  
22 ground that they think is lightning, when it may  
23 actually be, you know, the voltage we want on the  
24 line.

25                    So you don't generally see short stubs of

1 underground at transmission voltage because of the  
2 traveling wave and reflective wave problem. That's --  
3 sorry. That's about as simple as I can do. I had to  
4 do that for a whole semester, so sorry.

5 **Q. The line that you referenced in**  
6 **Minnesota, why did they build that one underground?**

7 A. No, they didn't. Because it was 20  
8 times, right. Yeah. The Wisconsin Commission and the  
9 Minnesota Commission both agreed that that was an  
10 exorbitant cost to bear for that.

11 **Q. But there is some transmission**  
12 **underground in this country?**

13 A. Yes, sir. Where we see it -- where it's  
14 used is in extremely urban, high-dense areas. So if  
15 we think about the city of Chicago, you've got an  
16 entire city built up 95 floors. So you need a lot of  
17 energy into a certain area and so you can only do that  
18 with the higher voltages. So in urban areas, New York  
19 and Chicago, they've got some underground  
20 transmission, but you don't see it in general use.  
21 It's strictly for a very dense urban core.

22 **Q. Are there any places around the world**  
23 **where they bury transmission that is not in an urban**  
24 **area?**

25 A. I can't speak to that. Again, generally

1 the economics are not there.

2 **Q. Okay.**

3 A. I mean undersea cables, those kinds of  
4 things would typically be underground.

5 **Q. Okay. Thank you.**

6 A. Sure.

7 JUDGE PRIDGIN: Commissioner Stoll.

8 COMMISSIONER STOLL: No questions. Thank  
9 you for your explanation.

10 JUDGE PRIDGIN: Commissioner Kenney.

11 COMMISSIONER KENNEY: No.

12 JUDGE PRIDGIN: Thank you. Commissioner  
13 Coleman.

14 COMMISSIONER COLEMAN: No.

15 JUDGE PRIDGIN: Any recross based on  
16 Bench questions from Staff?

17 MS. MYERS: No questions.

18 JUDGE PRIDGIN: Thank you, Ms. Myers.

19 MISO.

20 MR. SMALL: No, Your Honor.

21 JUDGE PRIDGIN: Public Counsel.

22 MR. OPITZ: No, thank you, Judge.

23 JUDGE PRIDGIN: Neighbors United.

24 MS. HERNANDEZ: No. But I'll offer

25 Exhibit 76.



1 JUDGE PRIDGIN: 76 has been offered. Any  
2 objections?

3 Hearing none, 76 is admitted.  
4 (NU Exhibit 76 was received into  
5 evidence.)

6 JUDGE PRIDGIN: Any redirect?

7 MR. DEARMONT: Briefly.

8 REDIRECT EXAMINATION BY MR. DEARMONT:

9 Q. Mr. Hackman, what is a common mode  
10 failure?

11 A. As described in my testimony, that's when  
12 an event or -- one or more events cause two other  
13 systems to fail. So practically in the transmission  
14 perspective, it would be something that would cause  
15 the loss of two transmission lines. And in my -- in  
16 my testimony, it's lines that would be adjacent to  
17 each other.

18 Q. A tornado?

19 A. A tornado, one structure falling on the  
20 other structure, you know, a shed, a run-away truck.

21 Q. Ms. Hernandez asked you a question about  
22 whether or not it would be impossible to build the  
23 Mark Twain project next to an existing 161. Do you  
24 remember that yes question?

25 A. Yes, I do.

1 Q. You said no, it's not impossible. Right?

2 A. That's correct.

3 Q. Okay. Would that scenario increase the  
4 likelihood of a common mode failure?

5 A. Yeah. Yes, sir. Absolutely.

6 Q. Okay. And despite your testimony today  
7 and your pre-written Surrebuttal, I understand that  
8 ATXI is proposing to parallel a small portion of the  
9 project; is that fair?

10 A. Yes, that's fair.

11 Q. Okay. Where is that and why?

12 A. It's on the line section from the new  
13 Zachary substation north of the Iowa border.

14 Q. Right at the border?

15 A. It -- yes. Uh-huh. Right.

16 Q. Okay. Why is ATXI doing that? Do you  
17 know?

18 A. Well, Mid-American -- this is a line that  
19 has to meet our neighbors. You know, we don't want  
20 the railroad to nowhere, so we had to agree. And  
21 Mid-American specified the point that they wanted to  
22 go to and so we had to get back to that point. And  
23 that section there was already aligned with it and  
24 that met all the criteria where paralleling makes  
25 sense.

1           **Q.     Okay. How many miles is that parallel**  
2 **portion, do you know?**

3           A.     I don't know. I would guess four miles,  
4 plus or minus, but I honestly don't know.

5           **Q.     Less than five?**

6           A.     Yes. I think so.

7           **Q.     Is it your understanding as you sit here**  
8 **today, that that parallel portion of the project is**  
9 **being received with open arms, for lack of a better**  
10 **description?**

11          A.     No. There are 11 parcels that are in the  
12 section that's going to be paralleled, about  
13 8 landowners that own those 11 parcels. And  
14 75 percent of those landowners are participating with  
15 Neighbors United against the line.

16          **Q.     No further questions. Thank you.**

17          JUDGE PRIDGIN: Thank you.

18          Mr. Hackman, thank you. You may step  
19 down.

20          THE WITNESS: Thank you.

21          JUDGE PRIDGIN: We're ready for  
22 Mr. Michels.

23          MR. TRIPP: Judge, I'm sorry to  
24 interrupt. I forgot to offer Exhibit 75 during my  
25 redirect of Mr. Wood. I'd like to offer that now.

1 JUDGE PRIDGIN: 75 is offered. Any  
2 objections?

3 Hearing none, 75 is admitted.  
4 (ATXI Exhibit 75 was received into  
5 evidence.)

6 JUDGE PRIDGIN: Thank you. Mr. Michels,  
7 if you'll raise your right hand to be sworn, please.

8 (Witness sworn.)

9 JUDGE PRIDGIN: Thank you very much.  
10 Mr. Lowery, when you're ready.

11 MR. LOWERY: Thank you, Your Honor.

12 MATTHEW MICHELS, testified as follows:

13 DIRECT EXAMINATION BY MR. LOWERY:

14 Q Good afternoon, Mr. Michels.

15 A. Good afternoon.

16 Q. **Could you please just state your name for  
17 the record?**

18 A. My name is Matthew Michels.

19 Q. **Mr. Michels, did you cause to be prepared  
20 for filing in this docket Surrebuttal Testimony that's  
21 been marked for identification as Exhibit 12?**

22 A. Yes, I did.

23 Q. **Do you have any corrections to your  
24 testimony?**

25 A. I have three minor misspellings to

1 correct, all the same word. I have misspelled  
2 Mr. Powers' name as Mr. Power first on page 4, line  
3 12; then again on page 12, line 15; and finally on  
4 page 19, line 4.

5 **Q. Those are the only corrections you have?**

6 A. Those are the only ones.

7 **Q. If I were to pose the same questions**  
8 **reflected in Exhibit 12 to you today, would your**  
9 **answers be the same?**

10 A. Yes. With an exception that to the  
11 extent that I've characterized expiration of tax  
12 credits for wind and solar, those would now change as  
13 a result of the extensions that were passed last  
14 month.

15 **Q. With that clarification about the**  
16 **extension of the tax credits that Congress passed last**  
17 **month, is the testimony in your pre-filed testimony,**  
18 **is it true and accurate to the best of your knowledge,**  
19 **information and belief?**

20 A. Yes, it is.

21 MR. LOWERY: With that, Your Honor, I  
22 would offer Exhibit 12 and tender Mr. Michels for  
23 cross-examination.

24 JUDGE PRIDGIN: Exhibit 12 is offered.  
25 Any objections?

1                   Hearing none, Exhibit 12 is admitted  
2                   (ATXI Exhibit 12 was received into  
3 evidence.)

4                   JUDGE PRIDGIN: Cross-examination from  
5 Staff.

6                   MR. WESTEN: Yes, thank you.

7 CROSS-EXAMINATION BY MR. WESTEN:

8                   **Q. Mr. Michels, my name is Jacob Westen and**  
9 **I am counsel for the Public Service Commission Staff.**  
10 **You actually touched on the topic that I wanted to ask**  
11 **you about and that is the extension to the wind and**  
12 **solar tax credits. Could you briefly describe what**  
13 **that extension is?**

14                  A. Yes. The production tax credit for wind  
15 was extended to projects that begin construction as  
16 late as 2019. It is phased out in three steps.  
17 80 percent of the 23 dollar per megawatt hour tax  
18 credit in 2017, 60 percent in 2018, and 40 percent in  
19 2019.

20                  For the investment tax credit available  
21 to, among other things, solar, that tax credit is  
22 extended to 2021, I believe. And for projects  
23 beginning construction in 2020, it steps down from  
24 30 percent to 26 percent to 22 percent for projects  
25 beginning construction in 2021. And then it phases

1 out the additional tax credit to leave the permanent  
2 10 percent tax credit thereafter.

3 **Q. Could you explain how this change in the**  
4 **tax credit -- tax credit climate, I guess is how I'd**  
5 **like to describe it, how does that impact your**  
6 **analysis that you've provided in your direct -- your**  
7 **testimony?**

8 A. Yeah. Some of the analysis that I  
9 performed was a simple cost and -- capital cost and  
10 capacity factor comparison, which is similar to what  
11 Mr. Powers did in his Rebuttal Testimony. So  
12 effectuating the tax credit would require more of a  
13 levelized cost of energy analysis.

14 As we heard when Mr. Powers was  
15 testifying, DOE has put out some levelized cost of  
16 energy projections out to 2020. They do show in their  
17 levelized cost of energy document the impact of -- of  
18 the 10 percent tax credit for solar. I believe it's  
19 11 dollars per megawatt hour. So that would go up to  
20 33 dollars per megawatt hour and then you would  
21 subtract the 23 stepping down by 80, 60, 40 percent  
22 for wind off the 73 dollars per megawatt hour that  
23 they projected for 2020.

24 **Q. Do these changes affect your ultimate**  
25 **conclusion that wind is still better than solar in**

1 **your testimony?**

2 A. No, it doesn't.

3 **Q. Okay. I have no other questions.**

4 JUDGE PRIDGIN: Thank you. Cross from  
5 MI SO.

6 MR. SMALL: No questions, Your Honor.

7 JUDGE PRIDGIN: Public Counsel.

8 MR. OPITZ: No cross, Your Honor.

9 JUDGE PRIDGIN: Neighbors United.

10 MS. HERNANDEZ: No questions.

11 JUDGE PRIDGIN: Bench questions,

12 Mr. Chairman.

13 CHAIRMAN HALL: No questions. Thank you.

14 JUDGE PRIDGIN: Commissioner Stoll.

15 COMMISSIONER STOLL: No questions. Thank  
16 you.

17 JUDGE PRIDGIN: Commissioner Kenney.

18 Commissioner Coleman. Any redirect?

19 MR. LOWERY: Just a little bit, Your  
20 Honor.

21 REDIRECT EXAMINATION BY MR. LOWERY:

22 **Q. Staff counsel was asking you about the**  
23 **tax credits and you spoke about, I believe, levelized**  
24 **cost of energy and the fact that the analysis that you**  
25 **did really wasn't a levelized cost of energy analysis,**



1 but was -- again, it was the capital cost and capacity  
2 factor analysis similar to what Mr. Powers did; is  
3 that right?

4 A. That's right.

5 Q. I just wanted to make sure the record was  
6 clear because I wasn't completely sure that it was.  
7 You mentioned at the end of your answer a \$73.60 per  
8 megawatt hour I believe and that was from DOE's 2020  
9 projection?

10 A. That's correct.

11 Q. And was I correct to understand that that  
12 number did not -- that number assumed there wasn't a  
13 production tax credit for wind in place. Correct?

14 A. That's correct. To include the  
15 production tax credit, you'd have to subtract amounts  
16 equal to 23 dollars times whatever the percentage is  
17 during the phase-out so 80, 60, 40. But in any case,  
18 you would subtract that from the 73 dollars.

19 Q. And get a mercurially lower number for  
20 levelized cost. Correct?

21 A. Even at 40 percent of the 23 dollars,  
22 we'd be talking about roughly 9 dollars a megawatt  
23 hour off the 73, which would take it to 64.

24 Q. And by contrast, the solar number that  
25 DOE had presented in that same exhibit did assume a

1 **10 percent credit for -- for solar. Right?**

2 A. They had it without first, which was 125,  
3 and then they included 10 percent, which took it down  
4 to 114. And if you took that 10 percent to  
5 30 percent, you'd take another 22 off of it and that  
6 would be 92 for solar compared to the 64 for wind with  
7 the PTC.

8 **Q. Okay. Thank you. Staff counsel also**  
9 **asked you whether or not your overall conclusion that**  
10 **wind costs were better than solar, in other words,**  
11 **wind was a cheaper resource than solar out in the**  
12 **future, whether that had changed. Do you remember**  
13 **that?**

14 A. Yes.

15 **Q. Can you -- can you explain briefly for**  
16 **the Commission why you hold that opinion, that wind --**  
17 **the cost of wind is actually advantageous as compared**  
18 **to solar into the future?**

19 A. Sure. When we look at this for  
20 integrated resource planning, we look at the levelized  
21 cost of energy for multiple different kinds of  
22 resources. And we did that comparison in the IRP with  
23 both wind and solar. We ended up with a 300 dollar  
24 per megawatt hour cost for solar. And that was based  
25 on our actual experience with the O'Fallon facility

1 that we put in in 2014. And we had in the range of  
2 80 or 90 dollars per megawatt hour for wind. And both  
3 of those are without any tax incentives.

4 So if we look at tax incentives and  
5 applying that, we would reduce those numbers. But in  
6 any case, a 30 percent tax credit off of that number  
7 for solar would take it down to around 200 dollars a  
8 megawatt hours. Those are based on today's costs.

9 As we look at projections that DOE and  
10 others have put out there, we see estimates that are  
11 declining in the future. And even if we took their  
12 declining estimates for solar and held our wind cost  
13 in today's dollar static, we would still end up with a  
14 wind cost on a -- on a per unit of output basis that  
15 is less than that for solar.

16 **Q. Thank you, Mr. Michels. I don't have any**  
17 **other further questions.**

18 JUDGE PRIDGIN: Mr. Michels, thank you.  
19 You may step down.

20 And we're ready for Mr. Lamacchia.

21 MR. TRIPP: May I approach, Your Honor?

22 JUDGE PRIDGIN: You may.

23 MR. TRIPP: This is a CD of Exhibit 74.

24 JUDGE PRIDGIN: Thank you.

25 If you would raise your right hand and be

1 sworn, si r.

2 (Witness sworn.)

3 JUDGE PRIDGIN: Thank you very much, si r.

4 And Mr. Lowery.

5 MR. LOWERY: Thank you, Your Honor.

6 JOSEPH LAMACCHIA, testified as follows:

7 DIRECT EXAMINATION BY MR. LOWERY:

8 **Q Could you please state your name for the**  
9 **record?**

10 A. Joe Lamacchia.

11 **Q. Mr. Lamacchia, did you cause to be**  
12 **prepared for filing in this docket Surrebuttal**  
13 **Testimony that's been premarked as Exhibit 18?**

14 A. Yes.

15 **Q. Mr. Lamacchia, do you have any**  
16 **corrections to that testimony?**

17 A. No.

18 **Q. If I were to pose the same questions that**  
19 **appear in the testimony today, would your answers be**  
20 **the same today?**

21 A. Yes.

22 **Q. Is the information that you provide in**  
23 **that testimony true and correct to the best of your**  
24 **knowledge, information and belief?**

25 A. Yes.

1 MR. LOWERY: Your Honor, with that, I  
2 would offer Exhibit 18 and tender Mr. Lamacchia for  
3 cross-examination.

4 JUDGE PRIDGIN: Exhibit 18 has been  
5 offered. Any objections?

6 Hearing none, Exhibit 18 is admitted.  
7 (ATXI Exhibit 18 was received into  
8 evidence.)

9 JUDGE PRIDGIN: Cross from Staff.

10 MR. WESTEN: Staff has no questions, Your  
11 Honor. Thank you.

12 JUDGE PRIDGIN: MISO.

13 MR. SMALL: No questions, Your Honor.

14 JUDGE PRIDGIN: OPC.

15 MR. OPITZ: No questions, Judge.

16 JUDGE PRIDGIN: Neighbors United.

17 CROSS-EXAMINATION BY MS. HERNANDEZ:

18 Q. Good afternoon. Hello. A few questions.  
19 You conducted a property tax analysis for Marion  
20 County. Correct?

21 A. Yes, I did.

22 Q. Okay. And that analysis was conducted in  
23 May 2015; is that correct?

24 A. Yes.

25 Q. And you completed that tax analysis to

1 estimate what you believe the tax benefits of the  
2 proposed line will be for Marion County; is that  
3 correct?

4 A. Specific to the Mark Twain project.

5 Q. Okay.

6 A. Not the Illinois Rivers project.

7 Q. Okay. Thank you for that clarification.

8 And just to try to simplify the line of questioning,  
9 for Knox, Shelby, Schuyler and Adair County, you also  
10 completed a tax analysis for the Mark Twain  
11 transmission project to estimate what you believe the  
12 tax benefits are of the proposed line in each of those  
13 counties. Correct?

14 A. Yes. We segregated the analysis between  
15 what we anticipate or would estimate the taxes to be  
16 while the project was in the construction phase and  
17 then once the lines were completed and energized, what  
18 the estimated taxes would be while the project was in  
19 service.

20 Q. Would you agree that your value of tax  
21 benefits for Marion, Knox, Shelby, Schuyler and Adair  
22 is gross of any effect the line will have on landowner  
23 property values?

24 A. This estimate reflects just the impact on  
25 county and tax authority property taxes pertinent to

1 the construction of the line itself. It only pertains  
2 to taxes which Ameren Transmission Company of Illinois  
3 is contributing to these taxing authorities.

4 **Q. That was a yes?**

5 A. Yes.

6 **Q. Okay. And would you agree that your**  
7 **value of tax benefits for Marion County, Knox County,**  
8 **Shelby County, Schuyler County and Adair County is**  
9 **gross of any costs for farming changes that the line**  
10 **may necessitate for the landowner. Correct?**

11 A. That's correct.

12 **Q. Okay. Did you speak to any residents of**  
13 **these counties when completing your analysis?**

14 A. No, ma'am.

15 **Q. Did you speak to any landowners in any of**  
16 **these counties when completing your analysis?**

17 A. No.

18 **Q. Did you speak to any public officials in**  
19 **any of these counties when completing your analysis?**

20 A. No.

21 **Q. Did you speak to any county commissioners**  
22 **in any of these counties when completing your**  
23 **analysis?**

24 A. No.

25 **Q. So you don't know whether any resident of**

1 **Marion County, Knox County, Shelby County, Schuyler**  
2 **County or Adair County prefers an increased tax base**  
3 **versus having no transmission line in their county?**

4 MR. LOWERY: Objection, calls for  
5 speculation and it is irrelevant.

6 JUDGE PRIDGIN: I'll overrule. He can  
7 answer if he knows and if he doesn't know, he can say  
8 so.

9 THE WITNESS: Could you please repeat  
10 that question?

11 BY MS. HERNANDEZ:

12 **Q. Sure. So you don't know whether any**  
13 **resident of Marion County, Knox County, Shelby County,**  
14 **Schuyler County or Adair County prefers an increased**  
15 **tax base versus having no transmission line in their**  
16 **county?**

17 A. I'm not aware of any thoughts along those  
18 lines.

19 **Q. Thank you. No further questions.**

20 JUDGE PRIDGIN: All right. Thank you.

21 Bench questions, Mr. Chairman.

22 CHAIRMAN HALL: No questions. Thank you  
23 for your testimony.

24 COMMISSIONER STOLL: No questions.

25 JUDGE PRIDGIN: Commissioner Kenney.



1 COMMISSIONER KENNEY: No, thank you.

2 JUDGE PRIDGIN: Commissioner Coleman.

3 Any redirect?

4 MR. LOWERY: Yes, Your Honor.

5 REDIRECT EXAMINATION BY MR. LOWERY:

6 **Q Mr. Lamacchia, in your opinion will there**  
7 **be an increased tax base as a result of the**  
8 **construction of the Mark Twain line in each of these**  
9 **counties as compared to the case where the line is not**  
10 **constructed?**

11 A. Yes, there will be an increase in the tax  
12 base.

13 **Q. So the last question that Ms. Hernandez**  
14 **asked you where she asked you whether or not you knew**  
15 **whether landowners would prefer or not prefer**  
16 **increased tax base, if they preferred an increased tax**  
17 **base, then the Mark Twain would meet that preference,**  
18 **would it not?**

19 A. Yes.

20 **Q. Would there be any reason for you to**  
21 **speak to landowners in order to determine what the**  
22 **property taxes are going to be from a transmission**  
23 **line in a county?**

24 A. No. Because the landowners have no input  
25 into the decision as to the valuation of our

1 transmission line in those counties.

2 **Q. Would there be a reason to talk to -- I**  
3 **don't know what public officials Ms. Hernandez was**  
4 **referring to, but would there be a need to talk to**  
5 **public officials in those counties?**

6 A. If an assessor in a given county would  
7 require some information from us, we would be more  
8 than willing to confer with the assessors who would  
9 have questions about the impact of a line.

10 **Q. But in terms of your need for**  
11 **information, you have the information you need without**  
12 **talking to county officials to make these**  
13 **calculations; isn't that true?**

14 A. Yes.

15 **Q. And same thing is true; you don't need**  
16 **information from a county commissioner either, do you?**

17 A. No.

18 **Q. Another question she asked you was about**  
19 **whether or not these calculations were gross of the**  
20 **impact on land values I think was the question. Do**  
21 **you remember that question?**

22 A. Yes.

23 **Q. Do you have an opinion about whether or**  
24 **not any impact on land values would offset in any way**  
25 **the taxes that would be paid as a result of the Mark**

1 **Twain project?**

2 A. I believe the impact of the increase in  
3 assessed values applicable to the construction of the  
4 line would completely outweigh any perceived decrease  
5 in land values over which easements were secured if  
6 there was any, you know, negligible decrease in land  
7 values where the easements occurred at all.

8 **Q. Thank you, Mr. Lamacchia.**

9 MR. LOWERY: I have no further questions,  
10 Your Honor.

11 JUDGE PRIDGIN: All right. Thank you,  
12 sir. You may step down.

13 And the last witness scheduled for  
14 today -- excuse me -- yeah, for the day is Mr. Jontry.  
15 If you'll raise your right hand to be sworn, please.

16 (Witness sworn.)

17 JUDGE PRIDGIN: Thank you, sir. You may  
18 have a seat. And counsel --

19 MR. FITZHENRY: For the court reporter,  
20 my name is Ed Fitzhenry on behalf of ATXI.

21 JUDGE PRIDGIN: Mr. Fitzhenry, thank you.  
22 When you're ready.

23 JAMES JONTRY, testified as follows:

24 DIRECT EXAMINATION BY MR. FITZHENRY:

25 **Q. Mr. Jontry, are you ready?**

1 A. Yes.

2 Q. Would you please state your name for the  
3 record?

4 A. James Jontry.

5 Q. And Mr. Jontry, have you caused and  
6 prepared for filing as evidence in this docket Direct  
7 Testimony identified as Exhibit 20?

8 A. That's the Direct Testimony?

9 Q. Yes.

10 A. No. That's -- yes. Yes, I did.

11 Q. And do you have any corrections or  
12 modifications to that testimony?

13 A. I do not.

14 Q. If I were to ask you the questions set  
15 forth in Exhibit 20, would you give the same answers  
16 today?

17 A. I would.

18 Q. And have you also caused to be prepared  
19 for submission as evidence in this docket the  
20 Surrebuttal Testimony --

21 A. I did.

22 Q. -- identified as Exhibit 21?

23 A. I did.

24 Q. Do you have any corrections,  
25 modifications to that testimony?

1 A. I do not.

2 Q. **If I were to ask you the same questions**  
3 **today, would you give the same answers?**

4 A. I would.

5 MR. FITZHENRY: One moment, Your Honor.  
6 I'm sorry. His Direct Testimony is 19, his  
7 Surrebuttal is 20. Thank you for that.

8 And with that, I move to exam-- move for  
9 the introduction of Mr. Jontry's Direct and  
10 Surrebuttal Testimonies and tender him for  
11 cross-examination.

12 JUDGE PRIDGIN: All right. Thank you.  
13 19 and 20 have been offered. Any objections?

14 Hearing none, 19 and 20 are admitted.

15 (ATXI Exhibits 19 and 20 were received  
16 into evidence.)

17 JUDGE PRIDGIN: Cross from Staff.

18 MR. WILLIAMS: Thank you, Judge.

19 CROSS-EXAMINATION BY MR. WILLIAMS:

20 Q. **Good afternoon, Mr. Jontry. How are you**  
21 **doing?**

22 A. Good. How are you?

23 Q. **I think the Commission's probably**  
24 **interested in this, so that's why I'm going to ask it.**  
25 **I'm not trying to trip you up or create problems, but**

1 my understanding is that ATXI gave Burns and McDonnell  
2 three points to do routing. One was Maywood, one was  
3 the Zachary substation and one was the point at the  
4 Iowa/Missouri border where the line would cross; is  
5 that correct?

6 A. That is correct.

7 Q. Well, I think the Maywood is pretty  
8 obvious as to why that's an end point. How did you  
9 arrive at the end point at the Iowa/Missouri border?

10 A. Mostly in consultation with the utility  
11 to the north we agreed that that was a convenient  
12 point on the border to route to. Not knowing exactly  
13 where anything else may occur but the routing effort,  
14 we agreed that that was a convenient point.

15 It is also in close proximity to the 161  
16 line which goes by the Appanoose substation and also  
17 provides a convenient point for the fiber optic wire  
18 that is routed in the shield wire to drop off into the  
19 substation as a -- which would amount to a repeater  
20 station essentially for the communications between the  
21 remote ends of the substations. Did I get too  
22 technical? I apologize.

23 Q. Well, I think your answer may have gone  
24 beyond just how you arrived at the location of the  
25 Iowa/Missouri border, which is what I was asking

1 **about.**

2 A. Okay.

3 **Q. If I understood your answer correctly,**  
4 **basically it was a negotiation that took place between**  
5 **Ameren Transmission Company and Mid-America?**

6 A. Correct.

7 **Q. And then how did you pick the location**  
8 **for the Zachary substation?**

9 A. The Zachary substation was a site that we  
10 purchased. It was large number to fit the Zachary  
11 substation and was in close proximity to the Adair  
12 substation where we would ultimately have to  
13 interconnect.

14 **Q. When did you acquire that site?**

15 A. That was in -- it was in 2014. I believe  
16 in June of 2014.

17 **Q. And --**

18 A. I'd have to look at the exact date, but I  
19 believe it was around that time.

20 **Q. And how was it that you picked that site**  
21 **to acquire?**

22 A. It was suitable to the construction of  
23 the substation and of the right size and available for  
24 sale.

25 **Q. Did proximity to the Adair station have**

1 **anything to do with the selection?**

2 A. That would influence, because there's a  
3 161 KV connection between Zachary and Adair. So the  
4 closer you are to it, the better the connection would  
5 be.

6 MR. WILLIAMS: No further questions.

7 JUDGE PRIDGIN: Mr. Williams, thank you.  
8 Cross from MISO.

9 MR. SMALL: No questions, Your Honor.

10 JUDGE PRIDGIN: Public Counsel.

11 MR. OPITZ: No questions. Thank you.

12 JUDGE PRIDGIN: Neighbors United.

13 CROSS-EXAMINATION BY MS. HERNANDEZ:

14 **Q. A few questions. Hello.**

15 A. High.

16 **Q. Were you here yesterday for the  
17 examination of Ms. Borkowski?**

18 A. I was, yes.

19 **Q. Okay. There's a couple questions I  
20 believe I asked her that she said that you would have  
21 knowledge on, so I just want to go through those  
22 today.**

23 A. Okay.

24 MS. HERNANDEZ: Okay. May I approach?

25 JUDGE PRIDGIN: Yes, you may.



1 (NU Exhibit 77 was marked for  
2 identification.)

3 BY MS. HERNANDEZ:

4 Q. You have in front of you what has been  
5 marked Exhibit 77. Do you recognize the document?

6 A. I do.

7 Q. And it's a response to -- from ATXI to  
8 Neighbors United to Request 2-21; is that correct?

9 A. Correct.

10 Q. And you would agree that it's an e-mail  
11 inviting different community representatives, which  
12 ATXI refers to as a CRF to the public open house  
13 meetings. And as we discussed yesterday, during the  
14 public open house meetings, these officials could go  
15 into the public meeting area that you were having in  
16 the evening for the landowners to go to those  
17 different stations; is that correct?

18 A. Just clarify. You -- this is an e-mail  
19 from Knox County only. Right? That's what you said?

20 Q. I'm sorry?

21 A. This is an e-mail from Knox County only.  
22 Right? I didn't hear if you said all the counties or  
23 just this particular county.

24 Q. I think this is the one that Knox County  
25 responds to your request, but if you look further down

1 on the page, it looks like it's an invitation to the  
2 CRF and public open house meetings for the public  
3 officials in each county.

4 A. Okay.

5 Q. Would you agree?

6 A. Correct. Yes.

7 Q. And we talked a little bit yesterday  
8 about the sign-in sheet that individuals were required  
9 to sign in the evening at the public open meetings  
10 where they could inquire about the project and their  
11 land. Correct?

12 A. Right.

13 Q. Do you know whether these public  
14 officials had to sign that sign-in sheet to be able to  
15 go through those different exhibits?

16 A. My understanding, no, they did not.  
17 There was no sign-in sheet.

18 MS. HERNANDEZ: May I approach the  
19 witness?

20 JUDGE PRIDGIN: You may.

21 MS. HERNANDEZ: This is a document that  
22 was admitted yesterday. It has the -- it reads as a  
23 response to DR 2-19, but when I went back and looked  
24 last night, it's actually a response to Data Request  
25 2-21. So it's the same document. I just -- can we

1 just clarify for the record that it is actually a  
2 response?

3 MR. FITZHENRY: I'm sorry. Could you  
4 show it to me? So what are you saying?

5 MS. HERNANDEZ: This is the one that had  
6 the title at the top that stated it was responding to  
7 2-19, but it's actually to this Data Request. So I  
8 just wanted to clarify for the record.

9 MR. FITZHENRY: If he knows.

10 COMMISSIONER STOLL: Counselor, do you  
11 have an exhibit number?

12 JUDGE PRIDGIN: Do you have an exhibit  
13 number? I'm sorry.

14 MS. HERNANDEZ: I don't. My paralegal is  
15 actually sick today and she has my list of what it was  
16 marked yesterday.

17 JUDGE PRIDGIN: It was admitted  
18 yesterday?

19 MR. TRIPP: It was 47.

20 JUDGE PRIDGIN: Mr. Tripp, thank you.

21 BY MS. HERNANDEZ:

22 Q. **Would you look at that? Do you recognize**  
23 **that document?**

24 A. I do.

25 Q. **And just for clarification, if we have --**

1 if we can, the top of the document states it's a  
2 response to DR 2-19. Would you agree that this was a  
3 document provided by you in response to DR 2-21?

4 A. I would.

5 Q. Okay. If you can look at the document,  
6 would you -- would you agree that since June of 2014,  
7 ATXI has contacted, either by in person, phone call or  
8 e-mail, the Knox County Commission?

9 A. I would agree, yes.

10 Q. And would you agree that since June 2014,  
11 you've contacted the Marion County Commission either  
12 by in person, phone call or e-mail approximately  
13 13 times?

14 A. I don't know the total count. I would  
15 have to rely on your word on that.

16 Q. Do you have any reason to --

17 A. I don't have reason to doubt that, no.

18 Q. You don't have reason to disbelieve  
19 that --

20 A. Yes. No, I do not.

21 Q. -- or challenge that?

22 A. Correct.

23 Q. Would you agree that since June 2014,  
24 ATXI has either contact -- or has contacted Shelby  
25 County Commission either in person, phone call or

1 e-mail approximately 16 times?

2 A. I have no reason to doubt that.

3 Q. Okay. And for Schuyler County, ATXI has  
4 contacted Schuyler County either by in person, phone  
5 call or e-mail -- ATXI has contacted approximately  
6 8 times the County Commission in Schuyler County?

7 A. I don't have reason to doubt that.

8 Q. And for Adair County, would you agree  
9 that ATXI has contacted the Adair County Commission  
10 either in person, phone call or e-mail approximately  
11 14 times?

12 A. I have no reason to doubt that.

13 Q. And if I could just go back to Knox  
14 County. I don't know if I said 2 attempts or  
15 11 contacts.

16 A. I would think it would be closer to 11.

17 Q. Okay. I meant to say 11. So would you  
18 disagree with that number?

19 A. No, I would not.

20 Q. Okay. If you look at this exhibit -- and  
21 you stated you were here yesterday for the testimony  
22 of Ms. Borkowski. She testified that ATXI has not  
23 sought a sense yet from the County Commissions -- from  
24 each County Commission. Do you remember her testimony  
25 on that point?

1 A. I do.

2 Q. If you could look to column 50 of this  
3 response that you provided. Are you there?

4 A. Yes.

5 Q. Okay. And would you agree that your Data  
6 Request response states that, On or about September  
7 21st, 2015 you had an in-person meeting that included  
8 yourself; a Glenn Eagan, which is a Shelby County  
9 Commissioner; a Jordan Force, which is the county  
10 attorney; and Mr. Rosencrants, ATXI's counsel. And in  
11 the substance of communication you provided, Provided  
12 general information about the project and discussed  
13 the resolutions passed by the Commission against the  
14 project and a limited request for an assent by ATXI.

15 A. That is what it reads.

16 Q. And you were in person for that meeting?

17 A. I was.

18 Q. And do you have an understanding or  
19 knowledge as to whether there was a request for an  
20 assent at that meeting?

21 A. We did not make a request for an assent  
22 at that meeting.

23 MS. HERNANDEZ: May I approach?

24 JUDGE PRIDGIN: You may.

25 (NU Exhibit 78 was marked for

1 i d e n t i f i c a t i o n . )

2 MS. HERNANDEZ: Is it okay if I get you  
3 two more copies, Your Honor?

4 JUDGE PRIDGIN: Certainly. That's fine.  
5 Thank you.

6 BY MS. HERNANDEZ:

7 Q. I marked this as Exhibit 78. Do you  
8 recognize this document?

9 A. I do.

10 Q. And would you agree that it's a certified  
11 copy of an order made out to Shelby County Commission  
12 that specifically addresses the Mark Twain  
13 transmission project?

14 A. I believe it's titled Certified Copy of  
15 Order. Is that your question is?

16 Q. Well, that's what -- right.

17 A. I mean --

18 Q. It says Certified Copy of Order.

19 A. Okay. It's not been certified I guess in  
20 any way, not been --

21 Q. This -- the Data Request itself asks for  
22 you to identify any communication between you or your  
23 agent with any County Commission in Schuyler, Adair,  
24 Knox, Shelby or Marion Counties; is that correct?

25 A. Yes.

1           **Q.     And the -- we -- the Data Request asked**  
2 **for communications. With each communication, provide**  
3 **the name of employee, the date of the communication,**  
4 **the form of the communication, the substance of the**  
5 **communication and attach any written documentation or**  
6 **materials provided to or exchanged with the County**  
7 **Commission related to said communication.**

8                     **Would you agree that's what the Data**  
9 **Request --**

10           A.     Yes.

11           **Q.     So it's still your testimony that this**  
12 **was not a document provided?**

13           A.     No, I'm sorry. This was a document  
14 provided.

15           **Q.     And you're stating that by providing a**  
16 **Certified Copy of Order, which hasn't been filled out**  
17 **but talks about assent specifically for Shelby County**  
18 **and the Mark Twain transmission project, is not a**  
19 **request for assent by ATXI?**

20                     MR. FITZHENRY: Your Honor, I'm going to  
21 object to the mischaracterization of Mr. Jontry's  
22 earlier testimony. He's testified this was a draft of  
23 a Certified Copy of Order, nothing more.

24                     JUDGE PRIDGIN: I'll overrule.

25                     THE WITNESS: Would you repeat the



1 question?

2 MS. HERNANDEZ: Can I have the court  
3 reporter read the exact question, please?

4 THE COURT REPORTER: "Question: And  
5 you're stating that by providing a Certified Copy of  
6 Order, which hasn't been filled out but talks about  
7 assent specifically for Shelby County and the Mark  
8 Twain transmission project, is not a request for  
9 assent by ATXI?"

10 THE WITNESS: No, I do not characterize  
11 it as a request for an assent from Shelby County.

12 BY MS. HERNANDEZ:

13 **Q. If you look to column 52 and the contacts**  
14 **document that you provided in response to the Data**  
15 **Request.**

16 A. Okay.

17 **Q. In column 52 it states an October 26,**  
18 **2015 date with an in-person meeting between**  
19 **Mr. Rosencrants; yourself; and Mr. Larry Welch, who**  
20 **was identified as a Marion County Commissioner --**

21 A. Correct.

22 **Q. -- correct?**

23 **And the substance of the communication,**  
24 **that column that you provided in response to this Data**  
25 **Request states, Provided general information about the**

1 **project and discussed the resolutions passed by the**  
2 **Commission against the project and the limited request**  
3 **for an assent by ATXI.**

4 A. That's what it reads.

5 **Q. But you -- this is your data -- or your**  
6 **response?**

7 A. Correct.

8 MS. HERNANDEZ: May I approach?

9 JUDGE PRIDGIN: You may.

10 (NU Exhibit 79 was marked for  
11 identification.)

12 BY MS. HERNANDEZ:

13 **Q. I've handed you what's been marked**  
14 **Exhibit 79. Do you recognize this document?**

15 A. I do.

16 **Q. And it's your response to the Data**  
17 **Request from requested from Neighbors United; is that**  
18 **correct?**

19 A. Correct.

20 **Q. Okay. And, again, it's a blank Certified**  
21 **Copy of Order, County of Marion at the top, talks**  
22 **about the Mark Twain transmission project, talks about**  
23 **what the assent means, has the commissioners' names on**  
24 **it; is that correct?**

25 A. Correct.

1 MR. FITZHENRY: Objection, asked and  
2 answered.

3 JUDGE PRIDGIN: Overruled.

4 THE WITNESS: Correct.

5 BY MS. HERNANDEZ:

6 Q. And it's your testimony as well -- you  
7 testified to the Shelby County example. Is your  
8 testimony the same for Marion County, that this is --  
9 you don't consider this a request for assent?

10 A. That is correct.

11 Q. If you could look at column 39 on the  
12 contacts list that you provided in response to the  
13 Data Request.

14 A. Okay.

15 Q. It states on March 27th, 2015 there's a  
16 phone call between an Aaron Baker and County  
17 Commissioners Cooper from Schuyler County, Bode from  
18 Marion County and Glasgow from Knox County. Did I  
19 read that correctly?

20 A. Correct.

21 Q. Is Aaron Baker under your direction?

22 A. He was not.

23 Q. Do you know who Aaron Baker is?

24 A. He was a consultant that was engaged to  
25 assist with the project, yes. I do know who he is.

1           **Q.     Was he with your company?**

2           A.     He is a consultant not with our company.

3           **Q.     Not with your company. But he was a**  
4 **consultant on behalf of ATXI? Is that your**  
5 **understanding?**

6           A.     Correct.

7           **Q.     Okay. And there's a column that talks**  
8 **about substance of communication. And it states,**  
9 **Discussed commissioners signing a consent. Did I read**  
10 **that correctly?**

11          A.     Discussed commissioners signing a  
12 consent, correct.

13          **Q.     And do you have the understanding that**  
14 **consent and assent mean the same thing?**

15          A.     I would assume in this context, they  
16 probably do.

17          **Q.     I asked Mr. Wood some questions earlier**  
18 **about Mr. Kevin Atkins. Are you familiar with him? I**  
19 **think he stated you were.**

20          A.     Do I know Kevin -- I do know Kevin  
21 Atkins, yes.

22          **Q.     Okay. Is he under your direction?**

23          A.     He's under my direction.

24          **Q.     Okay.**

25                 MS. HERNANDEZ: May I approach?

1 JUDGE PRIDGIN: You may.

2 (NU Exhibit 80 was marked for  
3 identification.)

4 BY MS. HERNANDEZ:

5 Q. I've handed you what's been marked  
6 Exhibit 80. Do you recognize this document?

7 A. I do.

8 Q. It's a Data Request marked -- or numbered  
9 8-10 from Neighbors United to ATXI. Would you agree  
10 with that?

11 A. Yes.

12 Q. And it's with regard to the Fish and  
13 Wildlife Service document that we discussed, the  
14 exhibit that we discussed with Mr. Wood earlier  
15 concerning the proposed route received by the Fish and  
16 Wildlife Service from ATXI on October 6, 2014; is that  
17 correct?

18 A. Yes.

19 Q. And the Data Request asks -- or it states  
20 that the Fish and Wildlife Service requested a meeting  
21 with Ameren and the Missouri Department of  
22 Conservation to coordinate efforts on the Mark Twain  
23 transmission project before the final alignment is  
24 selected. Did I read that question correctly?

25 A. You read the sentence correctly, yes.

1           **Q.     Okay. And in response to that question,**  
2 **Mr. Atkins, an employee under your direction, stated**  
3 **that ATXI did not hold that meeting with the agencies**  
4 **prior to selection of the final route; is that**  
5 **correct?**

6           A.     That is what it states.

7           **Q.     Do you supervise Mr. Atkins?**

8           A.     I do not supervise Mr. Atkins.

9           **Q.     Do you have any reason to believe that**  
10 **Mr. Atkins would not put a truthful statement in a**  
11 **Data Request?**

12          A.     I have no reason to doubt it.

13                   MS. HERNANDEZ: I have no further  
14 questions, but I would move for the admission of 77,  
15 78, 79 and 80, please.

16                   JUDGE PRIDGIN: Thank you. Any  
17 objections?

18                   MR. LOWERY: Your Honor, I don't think we  
19 have any objections. I just wanted to make sure the  
20 record was clear about something. 77 is the same  
21 exhibit as -- same as Exhibit 47, but 77's being  
22 offered because it was actually a response to 2-21; is  
23 that correct?

24                   MS. HERNANDEZ: Correct. It's just a  
25 numbering --

1 MR. LOWERY: I just wanted the record to  
2 be clear. Thank you.

3 JUDGE PRIDGIN: I appreciate that.

4 All right. Hearing no objections 77, 78,  
5 79 and 80 are all admitted.

6 (NU Exhibits 77, 78, 79 and 80 were  
7 received into evidence.)

8 JUDGE PRIDGIN: Bench questions,  
9 Mr. Chairman.

10 QUESTIONS BY CHAIRMAN HALL:

11 Q. Good afternoon. Just a few.

12 A. Okay.

13 Q. On page 10 of your Direct Testimony, you  
14 indicate a 2.1 million dollars per mile baseline cost  
15 for the project; is that correct?

16 A. Correct.

17 Q. Okay. And that includes easement costs?

18 A. Correct.

19 Q. Do you have a separate amount for the  
20 easement costs?

21 A. Let me clarify what you mean. By  
22 separate, have I accounted for that separately from  
23 this --

24 Q. No. I'm trying to figure out of that  
25 2.1, how much of that is easements? Or if there's

1 **another way of --**

2 A. Well, I'm trying to think if I could do  
3 the -- I don't have a convenient answer. I guess I  
4 could get the information. I just don't have it in  
5 the testimony or anything with me, I guess.

6 **Q. Okay.**

7 A. So --

8 **Q. So you'd be able to, at a later date,**  
9 **tell us how much of that is easements?**

10 A. I could.

11 **Q. And I don't really have a strong**  
12 **preference if the information is given per mile or per**  
13 **parcel or per --**

14 A. Well, I believe on the --

15 **Q. -- acre, however you want to --**

16 A. I believe on the Maywood to Zachary line,  
17 the parcel -- the right-of-way costs were  
18 approximately 6 million dollars just on that portion  
19 of it and then going north, it would be approximately  
20 half that. So I think total would be 10 million. I  
21 mean, these are -- as my recollection that I recall  
22 the estimate of the numbers were concerned.

23 **Q. So can you --**

24 A. So per mile I guess -- I'm sorry. So  
25 6 million on the -- it's about a 60-mile line so if I



1 could get Mr. Lowery's calculator back, I might be  
2 able to do it, but 6 million divided by 60.

3 MR. OPITZ: Judge, may I approach?

4 THE WITNESS: Thank you. Oh, so --  
5 that's not right. So 100,000 a mile.

6 BY CHAIRMAN HALL:

7 **Q. 100,000 per mile. Okay.**

8 A. I believe the exact numbers are actually  
9 contained in a work paper that I submitted as part of  
10 the testimony, but --

11 CHAIRMAN HALL: Perhaps if counsel could  
12 point that out to us, that would be --

13 MR. FITZHENRY: It's in a work paper.

14 MR. LOWERY: We wouldn't be able to find  
15 right now. That's for sure.

16 CHAIRMAN HALL: I don't need it right  
17 now.

18 BY CHAIRMAN HALL:

19 **Q. Second line of inquiry, Schedule JJ-02**  
20 **Proposed Projects Schedule. And we've had some**  
21 **discussion about this already where the -- the hope on**  
22 **behalf of the company was that it would have**  
23 **resolution of this -- this proceeding by January of**  
24 **this year. That's clearly not possible. How tight is**  
25 **this schedule? If ATXI were to get a favorable ruling**

1 **from the Commission but not get it until March, for**  
2 **example, does that push the whole thing back two**  
3 **months or is there some flexibility in the schedule?**

4 A. There's some flexibility in the schedule.  
5 March would not be bad. The -- the issue that we run  
6 into is getting the ability to acquire right-of-way in  
7 a manner that will allow us to do all of these studies  
8 that we need to do in advance of construction and  
9 final acquisition.

10 So I know what the schedule incorporates  
11 is certain windows for environmental studies. For  
12 example, one of the popular subjects was bats earlier.  
13 Well, the bat window to do studies for certain species  
14 is only between May and August -- May 15th and August  
15 15th. And then based on what those studies may or may  
16 not say, then you may be restricted to clearing  
17 certain areas to certain windows in the winter.

18 So this schedule laid out -- would allow  
19 us to do two of those seasons and we think we could do  
20 it in those. So provided we get an order that allows  
21 us to do the studies in a manner that gets us to final  
22 information from, you know, the environmental groups,  
23 then yeah. But it's -- it's still tight, I guess.

24 **Q. So is the -- is the engineering and the**  
25 **environmental permitting and monitoring proceeding on**

1 **schedule?**

2 A. Yes.

3 **Q. And --**

4 A. Go ahead. Yeah, engineering is -- is  
5 ahead of schedule actually. Environmental permitting  
6 and monitoring occurs throughout the life span of the  
7 project essentially so --

8 **Q. And you're probably not the right person**  
9 **to ask this, but that hasn't stopped me before so you**  
10 **can simply tell me I'm asking the wrong person. But**  
11 **why not do some of the right-of-way acquisition before**  
12 **getting a ruling from the Commission if you could just**  
13 **make it contingent upon a favorable ruling? I**  
14 **understand that's how other projects have worked. Why**  
15 **not this one? And if you don't know --**

16 A. I don't know. I think it's a business  
17 decision essentially that -- you know, there's a lot  
18 to -- I guess my concern -- I mean, the way I would  
19 view it as project manager, that there's something  
20 that comes out of your ruling that would mean that  
21 I've purchased something or acquired right-of-way that  
22 I no longer can use or --

23 **Q. You could make it contingent upon --**

24 A. Right.

25 **Q. Thank you. I have no further questions.**

1 JUDGE PRIDGIN: Mr. Chairman, thank you.  
2 Commissioner Stoll.

3 COMMISSIONER STOLL: No questions.

4 COMMISSIONER KENNEY: No questions.  
5 Thank you, sir.

6 JUDGE PRIDGIN: Commissioner Coleman.  
7 Thank you.

8 Cross based on Bench questions from  
9 Staff.

10 MR. WILLIAMS: Thank you, Judge. Just a  
11 few. Maybe one.

12 RECROSS-EXAMINATION BY MR. WILLIAMS:

13 **Q. In response to Commissioner Hall's**  
14 **questioning, you said something about the interplay**  
15 **between having a certificate from this Commission and**  
16 **doing bat studies. Do you recall that?**

17 A. As far as a schedule is concerned, yeah,  
18 there's certain things that have to occur in advance  
19 of that; one of which would be the decision from the  
20 Commission.

21 **Q. And why do you need to have a certificate**  
22 **from this Commission before you could do the bat**  
23 **studies?**

24 A. I'm just saying the linear progression of  
25 the activities would be we'd get the order, we would

1 negotiate for right-of-way, acquire enough  
2 right-of-way, then we could do substantial studies in  
3 order to do the -- which would amount to a biological  
4 assessment that goes through the US Fish and Wildlife  
5 Service. So it's really about the activities that  
6 occur before acquiring enough right-of-way to do  
7 substantial studies, I guess.

8 **Q. So to do the studies is dependent upon**  
9 **having the right-of-way and you're not acquiring the**  
10 **right-of-way until you have a certificate?**

11 A. Correct.

12 **Q. Okay. That's all I -- thank you.**

13 JUDGE PRIDGIN: Mr. Williams, thank you.

14 MISO

15 MR. SMALL: No questions, Your Honor.

16 JUDGE PRIDGIN: OPC.

17 MR. OPITZ: No, thank you, Judge.

18 JUDGE PRIDGIN: Neighbors United.

19 MS. HERNANDEZ: I don't have any  
20 questions, but I believe Mr. Lowery asked me about  
21 2-19, the Data Request and I misspoke. I don't  
22 remember which number you had labeled it as, but I  
23 didn't re-offer that one, just so the record's clear.  
24 I'm just saying it was actually four new exhibits.

25 MR. LOWERY: Well, it was my

1 understanding -- maybe I've messed up the record --  
2 that Exhibit 47 --

3 MS. HERNANDEZ: 77?

4 MR. LOWERY: No, I'm talking about 47. I  
5 thought you referred back to Exhibit 47 as being  
6 incorrectly labeled yesterday.

7 MS. HERNANDEZ: Right. The title. So I  
8 was clarifying it's actually 21.

9 MR. LOWERY: Okay. But then everything  
10 in 77, those are all new pages?

11 MS. HERNANDEZ: Yes.

12 MR. LOWERY: Okay. All right. Thank  
13 you.

14 JUDGE PRIDGIN: All right. Thank you.  
15 Redirect?

16 MR. FITZHENRY: Briefly, Your Honor.

17 REDIRECT EXAMINATION BY MR. FITZHENRY:

18 **Q. I want to refer you, Mr. Jontry, to hand**  
19 **you Exhibit -- or Exhibit 77. Excuse me, the exhibit**  
20 **that includes the information required by 2-19. I'm**  
21 **holding it up so we can sure we have the right one.**

22 A. Okay.

23 **Q. And on two of the line items where you**  
24 **were -- indicated being present at meetings involving**  
25 **certain counties, did it only include one commissioner**

1 **that was present at those two meetings that was**  
2 **referred to by Ms. Hernandez?**

3 A. Yes.

4 **Q. And how many commissioners are in each of**  
5 **those two counties where she referred you to with**  
6 **regard to this exhibit?**

7 A. Three.

8 **Q. I want to follow up on a question that**  
9 **Chairman Hall asked of Ms. Borkowski that was deferred**  
10 **of you, because I think it's an important question.**  
11 **You were asked -- or she was asked about the number of**  
12 **people that attended the ATXI-sponsored open houses.**  
13 **Do you remember that?**

14 A. Yeah. That number's just over a  
15 thousand.

16 **Q. Now, it could be that some of the same**  
17 **people came to more than one open house. Would that**  
18 **be right?**

19 A. That is possible, yes.

20 **Q. And how many people were escorted from**  
21 **any of those open houses?**

22 A. There were four people escorted out  
23 according to the DR that we responded to.

24 **Q. The information that you provided to**  
25 **Neighbors United?**

1 A. Correct.

2 Q. Let me refer you to Exhibit 80. Do you  
3 have that with you?

4 A. Which one is that?

5 Q. It's the NU 8-10 that was sponsored by  
6 Mr. Atkins.

7 A. Okay.

8 Q. And it talks about generally permitting  
9 and so forth and so on. Can you -- can you tell the  
10 Commission what is the status of any permitting  
11 requirements that Ameren holds with regard to the ATXI  
12 project?

13 A. Well, as far as the permitting concern  
14 that -- the way that permits for this line work is  
15 that there's a nationwide permit associated with  
16 transmission line projects. So under that permit, we  
17 essentially consult with the Corps of Engineers and  
18 federal and state agencies as required for them to  
19 issue an opinion. So there is no specific permit  
20 that's associated with the transmission line.

21 But we've been working very diligently  
22 and very hard with all of the agencies, especially US  
23 Fish and Wildlife and Missouri Department of  
24 Conservation, to satisfy all those requirements that  
25 would be under that nationwide permit.



1           **Q.     And as the project unfolds, are there**  
2 **verifications that are issued by any of these federal**  
3 **or state agencies with regard to different aspects of**  
4 **the project?**

5           A.     Yes, there are.

6           **Q.     Thank you, Mr. Jontry.**

7           JUDGE PRIDGIN: All right. Mr. Jontry,  
8 thank you very much. You may step down.

9           And that appears to be our last witness  
10 scheduled for the day. It looks like we are back on  
11 track according to the order of witnesses the parties  
12 filed. And let me verify we'll just begin with  
13 Jameson Smith tomorrow and then Dennis Smith -- or  
14 Dr. Smith rather going through that order?

15          MR. LOWERY: We're following the order as  
16 far as I know, Your Honor.

17          JUDGE PRIDGIN: All right. Anything  
18 further from counsel before we go off the record?

19          All right. Hearing nothing, we will  
20 stand in recess until 8:30 in the morning. Thank you.  
21 We are off the record.

22          (WHEREUPON, the hearing was adjourned  
23 until 8:30 a.m., January 27, 2016.)  
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21  
22  
23  
24  
25

I N D E X

AMEREN TRANSMISSION COMPANY OF ILLINOIS EVIDENCE

VICKIE TURPIN	
Direct Examination by Mr. Rosencrants	275
Cross-Examination by Ms. Hernandez	277
Questions by Commissioner Kenney	296
Redirect Examination (In-Camera) by Mr. Rosencrants	300
AARON DEJOIA	
Direct Examination by Mr. Tripp	305
Cross-Examination by Ms. Hernandez	307
Redirect Examination by Mr. Tripp	321
WILLIAM BAILEY	
Direct Examination by Mr. Tripp	332
Cross-Examination by Mr. Westen	335
Cross-Examination by Ms. Hernandez	339
Redirect Examination by Mr. Tripp	342
ROBERT M. VOSBERG	
Direct Examination by Mr. Lowery	441
CHRISTOPHER J. WOOD	
Direct Examination by Mr. Tripp	444
Cross-Examination by Ms. Hernandez	446
Questions by Chairman Hall	454
Questions by Commissioner Kenney	460
Redirect Examination by Mr. Tripp	463
Further Questions by Chairman Hall	476
Redirect Examination by Mr. Tripp	481
DAVID ENDORF	
Direct Examination by Mr. Dearmont	483
Cross-Examination by Ms. Hernandez	486
Questions by Chairman Hall	487
Redirect Examination by Mr. Dearmont	488
JEFFREY HACKMAN	
Direct Examination by Mr. Dearmont	492
Cross-Examination by Ms. Hernandez	494
Questions by Chairman Hall	501
Redirect Examination by Mr. Dearmont	507
MATTHEW MICHELS	

1	Cross-Examination by Mr. Westen	512
2	Redirect Examination by Mr. Lowery	514
	JOSEPH LAMACCHIA	
3	Direct Examination by Mr. Lowery	518
	Cross-Examination by Ms. Hernandez	519
4	Redirect Examination by Mr. Lowery	523
	JAMES JONTRY	
5	Direct Examination by Mr. Fitzhenry	525
6	Cross-Examination by Mr. Williams	527
	Cross-Examination by Ms. Hernandez	530
7	Questions by Chairman Hall	545
	Recross-Examination by Mr. Williams	550
8	Redirect Examination by Mr. Fitzhenry	552
9	NEIGHBORS UNITED EVIDENCE	
	WILLIAM POWERS	
10	Direct Examination by Ms. Hernandez	345
11	Cross-Examination by Ms. Myers	348
	Cross-Examination by Mr. Small	352
12	Cross-Examination by Mr. Lowery	356
	Questions by Chairman Hall	425
13	Redirect Examination by Ms. Hernandez	429
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

	EXHIBIT INDEX	MARKED	REC'D
1			
2	ATXI :		
3	ATXI Exhibit 5		
4	Surrebuttal Testimony of William Bailey		334
5	ATXI Exhibit 9		
6	Surrebuttal Testimony of Vickie Turpin		276
7	ATXI Exhibit 10		
8	Surrebuttal Testimony of Aaron DeJoi a		306
9	ATXI Exhibit 11		
10	Surrebuttal Testimony of Jeffrey Hackman494		
11	ATXI Exhibit 12		
12	Surrebuttal Testimony of Matt Michels		512
13	ATXI Exhibit 13		
14	Direct Testimony of David Endorf		485
15	ATXI Exhibit 14		
16	Surrebuttal Testimony of David Endorf		485
17	ATXI Exhibit 15		
18	Direct Testimony of Christopher Wood		445
19	ATXI Exhibit 16		
20	Surrebuttal Testimony of Christopher Wood		445
21	ATXI Exhibit 17		
22	Surrebuttal Testimony of Robert Vosberg		442
23	ATXI Exhibit 18		
24	Surrebuttal Testimony of Joseph Lamacchia		519
25	ATXI Exhibit 19		
26	Direct Testimony of James Jontry		527
27	ATXI Exhibit 20		
28	Surrebuttal Testimony of James Jontry		527
29	ATXI Exhibit 62		
30	Presentation	367	424
31	ATXI Exhibit 63		
32	Chapter 6 from Ameren Missouri IRP	373	424

	EXHIBITS INDEX (CONT'D)		
		MARKED	REC'D
1			
2	ATXI Exhibit 64		
3	Joint Filing	373	
4	ATXI Exhibit 65		
5	Commission Order	373	
6	ATXI Exhibit 66		
7	Report	389	424
8	ATXI Exhibit 67		
9	Wind Vision Report	296	424
10	ATXI Exhibit 68		
11	Not identified	406	424
12	ATXI Exhibit 69		
13	Brattle study 411424		
14	ATXI Exhibit 70		
15	Levelized cost information 418424		
16	ATXI Exhibit 71		
17	Documents from Annual Energy Outlook	420	424
18	ATXI Exhibit 74		
19	Data Request NU-2-16	483	467
20	ATXI Exhibit 75		
21	Photographs	469	510
22	STAFF OF THE MISSOURI PUBLIC SERVICE COMMISSION:		
23	Staff Exhibit 61		
24	Executive Summary 350352		
25	NEIGHBORS UNITED:		
26	NU Exhibit 42		
27	Rebuttal Testimony of William Powers		348
28	NU Exhibit 43		
29	Surrebuttal Testimony of Bill Powers		348
30	NU Exhibit 56		
31	Appraisal	278	297

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

EXHIBITS INDEX (CONT'D)

	MARKED	REC'D
NU Exhibit 57 Data Request	281	297
NU Exhibit 58 Example case	283	297
NU Exhibit 59-HC Appraisal, Highly Confidential	271	297
NU Exhibit 60 Webpage printout	341	344
NU Exhibit 72 Data Request Response 8-6	447	449
NU Exhibit 73 Data Request Response 6-9, Supplement 1	451	454
NU Exhibit 76 Data Request Response 0057 495507		
NU Exhibit 77 Data Request Response 2-21 531545		
NU Exhibit 78 Certified Copy of Order	536	545
NU Exhibit 79 Certified Copy of Order	540	545
NU Exhibit 80 Data Request 8-10 543545		

1  
2  
3  
4  
5  
6  
7  
8  
9  
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CERTIFICATE OF REPORTER

I, Tracy Thorpe Taylor, CCR No. 939, within the State of Missouri, do hereby certify that the testimony appearing in the foregoing matter was duly sworn by me; that the testimony of said witnesses was taken by me to the best of my ability and thereafter reduced to typewriting under my direction; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this matter was taken, and further, that I am not a relative or employee of any attorney or counsel employed by the parties thereto, nor financially or otherwise interested in the outcome of the action.

*Tracy L.J. Taylor*

Tracy Thorpe Taylor, CCR



<b>A</b>				
<b>A-16</b> 421:16,17	<b>accommodate</b> 362:16	<b>acronym</b> 390:24	352:6 431:10	<b>AEO</b> 439:13
<b>a.m</b> 555:23	<b>account</b> 336:15	<b>act</b> 331:7	439:9	<b>aerial</b> 309:12
<b>A16</b> 439:3	336:18 338:16	<b>Acting</b> 273:12	<b>adds</b> 492:11	314:13,14,23
<b>A2</b> 448:9,12,19	339:1 369:9,11	<b>action</b> 331:1	<b>adequately</b>	314:25 461:6
<b>A3</b> 448:21,22,23	370:6 419:10	431:19 561:11	323:15	461:15 464:3
<b>A5</b> 439:15	455:2	561:15	<b>adjacent</b> 479:16	480:1
<b>Aaron</b> 305:11,19	<b>accounted</b>	<b>activities</b> 289:13	507:16	<b>aerially</b> 315:22
306:5 329:24	545:22	312:6 319:7	<b>adjourned</b>	<b>aesthetics</b>
541:16,21,23	<b>accounts</b> 419:9	320:15 486:22	555:22	341:22
556:7 558:6	419:9,11	497:12,23	<b>administered</b>	<b>affect</b> 370:16
<b>abbreviated</b>	<b>accuracy</b> 384:3	550:25 551:5	328:22	460:3 473:15
418:21	<b>accurate</b> 347:17	<b>activity</b> 488:10	<b>Administration</b>	513:24
<b>ability</b> 317:8	484:16 485:9	<b>actual</b> 336:4,18	388:20,22	<b>affordable</b> 403:6
363:1 548:6	493:16 511:18	364:9,14	<b>administrative</b>	403:11 437:6
561:8	<b>accurately</b>	385:10,14	375:2 431:19	<b>afternoon</b>
<b>able</b> 317:5	450:21	438:10,10	432:20,22	424:24 425:7
323:13 325:18	<b>achievable</b>	461:15 516:25	<b>admission</b>	441:15 454:19
327:16 331:7	403:10 437:6	<b>Adair</b> 308:11,14	276:10 424:8	454:20 483:20
331:10 461:8	<b>achieve</b> 330:15	362:3 460:22	442:9 449:14	487:17,18
462:4 470:25	<b>acknowledge</b>	520:9,21 521:8	454:8 485:18	492:24 494:16
472:21 476:11	411:22 433:25	522:2,14	493:24 544:14	494:17 501:3,4
476:24 502:21	<b>acknowledges</b>	529:11,25	<b>admit</b> 334:16	510:14,15
532:14 546:8	436:17	530:3 535:8,9	352:13 375:16	519:18 527:20
547:2,14	<b>acoustics</b> 341:21	537:23	424:7 445:18	545:11
<b>Absol--</b> 353:12	<b>acquire</b> 529:14	<b>add</b> 323:3	467:15	<b>ag</b> 488:22,24
<b>absolutely</b>	529:21 548:6	426:12	<b>admitted</b> 276:16	<b>ag--</b> 401:8
478:15 501:8	551:1	<b>added</b> 395:9	306:21 334:21	<b>agencies</b> 343:21
508:5	<b>acquired</b> 549:21	<b>addition</b> 433:15	344:19 348:2	544:3 554:18
<b>AC</b> 379:19	<b>acquiring</b> 551:6	<b>additional</b>	352:16 424:12	554:22 555:3
380:2 381:15	551:9	401:18 462:18	442:13 445:23	<b>agency</b> 328:23
381:22,24	<b>acquisition</b>	480:6 496:6,20	449:22 454:12	418:14
382:9,25 383:8	548:9 549:11	497:10,11	462:21 467:19	<b>agent</b> 537:23
383:16,19	<b>acre</b> 322:18	499:11 500:16	485:23 494:3	<b>ago</b> 349:20
384:9,12,12,20	488:25 546:15	513:1	507:3 510:3	361:23 379:19
384:23 386:13	<b>acreage</b> 329:20	<b>additions</b> 388:15	512:1 519:6	382:16 391:2
409:15 412:12	473:16	427:5	527:14 532:22	393:2 397:21
412:13 413:6	<b>acreages</b> 473:20	<b>address</b> 358:15	533:17 545:5	<b>agree</b> 277:23
417:2	<b>acres</b> 277:16	425:24,25	<b>adopt</b> 431:14	283:16,21
<b>acceptance</b>	279:18 423:5,7	454:2	<b>advance</b> 548:8	284:1,6,8,11
445:19	448:13,24	<b>addressed</b>	550:18	285:25 286:7
<b>access</b> 323:16	449:2,3,6	275:25	<b>advantageous</b>	286:20 287:15
372:5 480:2	470:9 471:17	<b>addresses</b>	516:17	288:8,15,21
503:7	472:2	537:12	<b>advice</b> 325:5	307:7,10,14,17
		<b>addressing</b>	<b>AEIA</b> 390:17	307:21,24



308:3,6,10,13 308:17,21 309:1,8,11,15 309:19 310:8 310:12,20 311:5,14,24 312:2,9,20 314:16 315:2,6 316:12 341:11 352:2,5 363:14 363:19,23 364:18 369:20 375:24 381:6 383:13 385:14 386:18 392:21 394:9 399:6 401:14 402:3 411:23 412:24 422:3,18 423:11 447:12 447:13 448:1 450:2,23 451:17,18,22 451:23,24 452:6,11 453:21,24 473:12 486:12 487:8 497:17 499:1 508:20 520:20 521:6 531:10 532:5 534:2,6,9,10 534:23 535:8 536:5 537:10 538:8 543:9 <b>agreed</b> 326:16 372:2 373:25 422:20,23 505:9 528:11 528:14 <b>agreement</b> 274:13 <b>agricultural</b> 277:15 279:14	309:12 330:24 487:9 <b>agriculture</b> 282:15 312:7 317:25 319:22 320:24 328:13 330:22 <b>agronomy</b> 324:16 <b>ahead</b> 280:23 319:24 357:1 388:25 425:11 427:17 471:8 549:4,5 <b>air</b> 322:2 502:1 502:2 <b>airport</b> 342:6 <b>aligned</b> 508:23 <b>alignment</b> 452:4 453:20 454:1 543:23 <b>alleged</b> 428:6 <b>ALLISON</b> 273:12 <b>allow</b> 329:21 330:1 331:5 432:5 495:4 548:7,18 <b>allowed</b> 435:1 <b>allows</b> 548:20 <b>alternating</b> 338:6 379:19 380:1 <b>alternative</b> 271:14 354:10 368:5 433:22 <b>alternatives</b> 352:6 432:9,17 464:20 465:16 <b>Ameren</b> 271:13 272:5,11 275:10,21 277:6,9,10,13 277:16 279:6	279:17 288:17 288:18,22 305:17 333:3 359:21 360:4 366:20,22 373:23 374:8 375:9 376:5,10 378:6 382:2,24 384:22 419:3 425:24 427:8 431:7 444:13 450:18 451:21 453:17 484:1 493:4 521:2 529:5 543:21 554:11 556:3 558:24 <b>Ameren's</b> 425:13 426:4 <b>American</b> 390:17 <b>Amish</b> 476:22 476:25 477:9 477:17,24 478:5,11 479:8 479:13,18 481:25 482:12 <b>amount</b> 313:7 364:18,19 369:18 435:15 487:8 498:7 528:19 545:19 551:3 <b>amounts</b> 515:15 <b>analyses</b> 354:16 361:14 430:18 <b>analysis</b> 350:23 353:13 354:10 354:21,23 355:2 363:6 403:24 425:14 425:14 429:20 439:1,12,20 440:3,7 496:19	496:23,25 499:2,19 513:6 513:8,13 514:24,25 515:2 519:19 519:22,25 520:10,14 521:13,16,19 521:23 <b>analyst</b> 379:1 382:6 386:22 400:7 <b>analysts</b> 368:21 400:7 <b>angle</b> 489:22,22 489:23 490:7 <b>angles</b> 456:8,9 456:10 460:1,2 489:5,6 <b>animals</b> 343:12 <b>annual</b> 391:17 417:22 418:10 418:13 420:12 422:7 559:13 <b>answer</b> 284:13 284:16 298:12 311:19 314:1 353:17 355:8 362:21 364:5 365:6,9,16,19 387:7 414:23 428:1 434:17 435:11 453:7 456:24 464:7 487:23 488:19 515:7 522:7 528:23 529:3 546:3 <b>answered</b> 364:22 417:18 463:13,22 541:2 <b>answers</b> 276:2,7 306:7 320:25	334:10 347:13 442:2,5 445:11 463:21 484:21 485:13 493:21 511:9 518:19 526:15 527:3 <b>anticipate</b> 480:7 520:15 <b>anticipated</b> 443:13 <b>anxious</b> 501:4 <b>anyway</b> 328:11 437:23 <b>apart</b> 439:10 <b>apologize</b> 274:20 299:1,2 317:22 344:16 346:25 385:18 388:24 390:12 391:10 398:15,24 399:1 407:17 408:19 415:18 418:17 421:13 458:21 459:17 476:18 528:22 <b>Appaloose</b> 346:20 <b>Appanoose</b> 346:21 528:16 <b>apparently</b> 459:11 <b>appear</b> 390:3 518:19 <b>appearing</b> 402:19 561:6 <b>appears</b> 279:8 283:19 467:7 482:23 555:9 <b>appendices</b> 397:13 398:2 398:10,13,14 398:17 402:9 408:22 <b>appendix</b> 397:12
--	---	---	--	--

400:18,20 401:2,14 402:5 402:6 408:23 409:2,25 410:3 <b>apples</b> 499:16,16 <b>apples-to-apples</b> 369:13 386:13 <b>applicable</b> 419:10 525:3 <b>applicant</b> 440:19 <b>application</b> 271:13 309:12 314:13,14,18 314:23,23 315:1,1,4 316:4,15 352:7 360:6 436:20 440:10 <b>applied</b> 430:6 435:21 504:11 <b>apply</b> 349:19,22 394:15 <b>applying</b> 314:24 517:5 <b>appraisal</b> 277:14 277:25 278:4 278:11 279:5,7 279:9,17,21 298:3,4 559:24 560:6 <b>appraisals</b> 277:24 <b>appraiser</b> 278:10 <b>appreciate</b> 504:1 545:3 <b>approach</b> 278:14 281:9 283:8 315:8 325:19 340:24 350:10 357:3 371:8,18 415:5 421:7 426:10	446:23 451:6,7 466:9,12 469:11 478:23 495:15 517:21 530:24 532:18 536:23 540:8 542:25 547:3 <b>approaches</b> 426:20 <b>approaching</b> 504:18 <b>appropriately</b> 490:25 <b>appropriateness</b> 357:10 <b>approve</b> 426:24 <b>approved</b> 430:11,13 <b>approximately</b> 281:4 423:10 448:13,24 449:2,3,6 460:18 488:22 534:12 535:1,5 535:10 546:18 546:19 <b>apps</b> 326:5,5 <b>aquifer</b> 323:1 <b>area</b> 278:4,7 310:3 315:25 323:25 324:4 324:17,17 343:6,23 351:6 358:23 362:20 363:3,17,20,22 363:24 364:23 365:22 366:1 375:20 376:15 461:14 464:18 464:19 466:3 472:25 475:20 478:8 479:8 505:17,24 531:15	<b>areas</b> 316:4 317:1 325:1,6 325:6,9,10 433:25 456:3 468:1,20,20,23 470:6 472:9,13 472:22 505:14 505:18 548:17 <b>arguably</b> 395:14 <b>argue</b> 471:18 472:8,9 474:4 474:6 <b>argument</b> 367:1 <b>arising</b> 420:11 <b>arms</b> 509:9 <b>arresters</b> 504:20 <b>arrive</b> 528:9 <b>arrived</b> 528:24 <b>arrow</b> 341:19 448:16 <b>article</b> 284:20,24 285:25 286:7 286:21 287:3 <b>articles</b> 312:2 <b>ARTURO</b> 272:17 <b>aside</b> 331:4 417:6 <b>asked</b> 276:6 306:5,6 321:18 323:18 324:20 326:14 327:5 329:9 330:16 342:23 364:4 364:17 365:8 390:4 391:2 431:24 433:6 434:5,11 435:20 437:11 437:14 438:16 438:18 445:9 445:10 453:7 467:23 484:19 485:12 488:9	493:19 507:21 516:9 523:14 523:14 524:18 530:20 538:1 541:1 542:17 551:20 553:9 553:11,11 <b>asking</b> 374:3,13 402:23 431:25 437:21 459:18 480:1 488:14 498:15 514:22 528:25 549:10 <b>asks</b> 537:21 543:19 <b>aspects</b> 425:13 555:3 <b>aspirational</b> 406:4 <b>assent</b> 536:14,20 536:21 538:17 538:19 539:7,9 539:11 540:3 540:23 541:9 542:14 <b>asserting</b> 355:3 <b>assessed</b> 525:3 <b>assessing</b> 433:18 <b>assessment</b> 338:16,17,18 359:14 551:4 <b>assessor</b> 524:6 <b>assessors</b> 524:8 <b>assist</b> 341:13 541:25 <b>Assistant</b> 273:5 273:6 <b>associated</b> 271:17 338:3 440:18 486:22 497:12,24 554:15,20 <b>Association</b> 390:17	<b>assume</b> 311:21 354:16 372:4 377:15,20,21 381:13 382:10 412:16,18 457:22 515:25 542:15 <b>assumed</b> 369:17 370:12 372:9 377:2,6,22 378:6,19 391:4 392:10 410:19 411:6 413:5,8 413:16,17 422:23 515:12 <b>assumes</b> 416:24 <b>assuming</b> 314:14,21 363:15 369:6 377:11 382:12 <b>assumption</b> 380:15,20 413:15,21 439:6 <b>assumptions</b> 391:17 401:2 401:15,19 402:4,7,10 409:6,21 410:5 416:15,16 425:13,14,19 425:22 438:17 439:1,13 <b>Atkins</b> 454:5 542:18,21 544:2,7,8,10 554:6 <b>attach</b> 359:20 367:14 490:20 538:5 <b>attached</b> 276:12 284:24 343:16 349:24 360:22 388:17 390:2
---	---	---	--	--

467:9,11 <b>attachment</b> 281:20 285:23 327:20 430:4 <b>attachments</b> 285:6 467:11 <b>attempt</b> 416:6 450:4 <b>attempting</b> 314:17 433:2 <b>attempts</b> 535:14 <b>attend</b> 451:5 <b>attended</b> 553:12 <b>attention</b> 353:4 420:15 <b>attorney</b> 272:2,2 272:7,7,8,12 272:16,17,21 273:1 495:7 536:10 561:13 <b>attribute</b> 426:3 <b>ATXI</b> 276:10,17 298:8 308:18 308:22 309:20 310:19 313:21 313:25 314:5,7 315:16 318:5 318:22 319:2 320:5,10 329:21 330:5 334:22 344:9 345:6 353:12 356:15 367:8 373:6,10 389:22 396:17 406:19 411:14 418:3 420:7 424:13 427:19 429:6 442:15 445:24 447:11 450:23 451:16 454:3,24 455:4 456:15 459:22 462:4,6 466:25	467:20 469:15 483:6 484:7,25 485:18,24 493:9,24 494:4 495:4,24 508:8 508:16 510:4 512:2 519:7 525:20 527:15 528:1 531:7,12 534:7,24 535:3 535:5,9,22 536:14 538:19 539:9 540:3 542:4 543:9,16 544:3 547:25 554:11 558:2,3 558:4,6,7,9,10 558:12,13,15 558:16,18,19 558:21,22,24 559:2,4,5,7,8 559:10,11,13 559:14,16 <b>ATXI's</b> 327:14 327:19 329:15 329:17 348:3 476:8,9 488:14 495:4 536:10 <b>ATXI-sponsor...</b> 553:12 <b>August</b> 330:14 430:11 548:14 548:14 <b>author</b> 400:3 <b>authorities</b> 521:3 <b>authority</b> 520:25 <b>authorized</b> 358:3 <b>authorizing</b> 271:15 358:1,4 432:1 <b>available</b> 330:8	352:6 423:16 423:21 428:11 443:11 512:20 529:23 <b>Avenue</b> 272:8 <b>average</b> 337:4 337:19 372:11 372:12 386:22 419:17 <b>avoid</b> 455:22 456:5,8,9 465:11 472:22 473:7 477:18 477:19 502:21 <b>avoided</b> 438:24 439:11,15 479:7 <b>avoiding</b> 456:2 <b>aware</b> 331:22 396:6,10,12 397:3 465:24 468:12 522:17 <b>axle</b> 326:18,21 327:1,2 <b>axles</b> 326:20,25 <hr/> <b>B</b> <b>B</b> 272:2 <b>B13</b> 450:10 <b>B9</b> 449:12 450:3 <b>back</b> 274:20,22 299:5,6 316:14 317:14 325:7 326:6 328:13 328:25 329:11 330:5,23 344:9 344:23 345:3,5 350:2 354:25 392:14 405:3 408:11,19,20 408:21 411:9 416:11 421:15 424:17,24 427:13 452:17	458:24 482:20 483:8 503:17 504:6,9,17 508:22 532:23 535:13 547:1 548:2 552:5 555:10 <b>background</b> 343:21 355:16 357:9 <b>backwards</b> 421:21 <b>bad</b> 402:23 548:5 <b>Bailey</b> 274:20 332:6,8,10,20 332:24 333:6,8 334:18 335:8 337:22 339:23 342:23 344:3 556:10 558:3 <b>Baker</b> 541:16,21 541:23 <b>balance</b> 434:1 456:1 <b>ball</b> 491:5,19 <b>base</b> 522:2,15 523:7,12,16,17 <b>based</b> 298:15 312:23 324:6 324:15 326:18 337:19 370:11 413:25 416:16 428:24 430:7 432:23 440:6,6 449:18 452:22 462:10 474:11 475:14 476:1 481:10 488:21 506:15 516:24 517:8 548:15 550:8 <b>baseline</b> 545:14 <b>basic</b> 277:23,25	<b>basically</b> 349:1 429:24 467:12 469:4 489:12 490:16 491:20 529:4 <b>basis</b> 337:15 340:13,13 354:22 369:13 371:6 376:19 379:15 380:3 381:15,22 386:14 417:2 436:11 517:14 <b>bat</b> 359:3 433:6 448:4,8,18 450:12 452:1,2 452:6 465:9 468:12 473:8 475:2,2,6,13 475:17,23 476:1,2 548:13 550:16,22 <b>bat's</b> 450:5 <b>bats</b> 359:16 452:13 475:10 548:12 <b>bear</b> 398:25 415:10 505:10 <b>bees</b> 359:17 <b>beginning</b> 323:18 328:7 435:11 512:23 512:25 <b>begins</b> 410:1 452:19 453:13 <b>behalf</b> 305:17 333:2 359:25 428:4,6 444:13 525:20 542:4 547:22 <b>behavior</b> 340:15 340:17 <b>behaviors</b> 340:8 340:14
--	---	--	--	--

<b>belief</b> 306:14 334:14 347:18 442:6 445:15 484:17 485:10 493:17 511:19 518:24	353:13 354:10 354:23 355:4 440:20 <b>benefits</b> 436:22 440:20 520:1 520:12,21 521:7	343:7 551:3 <b>biologist</b> 359:6 <b>biomass</b> 346:18 <b>birds</b> 359:16 <b>Bishop</b> 477:13 477:14	438:7 450:2 <b>boundaries</b> 287:3 <b>boundary</b> 279:22 471:12	<b>buildings</b> 499:17 <b>builds</b> 309:20 <b>built</b> 440:11 505:16 <b>bulk</b> 426:12 <b>bullet</b> 287:16,22 288:9 341:19 379:5 385:19 385:24 386:11 408:12 449:12 450:10
<b>believe</b> 277:18 279:15 284:9 298:10 311:1 313:25 329:7 350:15 369:16 399:8 410:18 418:2 424:2 425:15 441:3 446:2 452:7 455:3 459:16 468:20 474:10 475:19 477:14 478:11,13 482:13 483:9 488:24 492:16 497:5 512:22 513:18 514:23 515:8 520:1,11 525:2 529:15 529:19 530:20 537:14 544:9 546:14,16 547:8 551:20	<b>best</b> 306:14 328:12 334:14 347:17 380:21 381:6 386:5 428:8 432:25 437:25 438:1 442:6 445:14 465:6 467:9 484:16 485:9 493:16 511:18 518:23 561:8	<b>bit</b> 317:7,21 322:19 324:3 324:18 357:9 376:1 387:3 390:25 452:18 514:19 532:7 <b>black</b> 471:12 <b>blade</b> 407:13 <b>blank</b> 540:20 <b>block</b> 448:12,20 450:7,13 472:6 473:15,22 <b>blocks</b> 448:3,7 448:24 469:23 469:25 470:8 474:1	<b>box</b> 272:3,9 273:8,13 375:21,22 <b>Boyd</b> 275:25 276:1 <b>brain</b> 340:6 343:7 <b>Brattle</b> 411:19 412:6 413:25 416:13,19 559:10 <b>Brattle's</b> 412:23 <b>break</b> 332:12,13 344:5,13,23,24 482:19 483:2 <b>breaking</b> 424:16 <b>brief</b> 328:1 460:14 <b>briefly</b> 298:2 342:21 354:25 467:10 507:7 512:12 516:15 552:16	<b>bullets</b> 402:22 403:1 <b>buried</b> 501:10 <b>Burns</b> 444:10 447:23 476:7 528:1 <b>bury</b> 455:6 487:21 501:6 501:14 503:9 505:23 <b>burying</b> 454:21 455:2 <b>business</b> 549:16
<b>believed</b> 287:18 288:4 <b>Bench</b> 298:15 321:6 342:9 424:18 425:1,2 428:25 443:2 454:15 462:10 481:9,10 487:15 490:24 501:1 506:16 514:11 522:21 545:8 550:8 <b>beneficial</b> 403:11 437:6 <b>benefit</b> 353:11	<b>bet</b> 388:6 <b>better</b> 314:1 319:17 326:9 428:12 435:17 436:18,19 438:14 509:9 513:25 516:10 530:4 <b>beyond</b> 408:24 477:19 528:24 <b>bias</b> 428:3,6 <b>bid</b> 438:10 <b>bids</b> 439:24 <b>big</b> 456:5 473:6 <b>bigger</b> 427:10 491:25,25 <b>biggest</b> 329:10 <b>Bill</b> 346:8 559:23 <b>billion</b> 433:3 503:2 <b>biological</b> 340:13,13,15	<b>Bloomberg</b> 368:23 400:5,6 <b>blow</b> 500:13 <b>blow-out</b> 498:8 <b>board</b> 426:24 430:10,14 <b>Bode</b> 541:17 <b>body</b> 343:8 <b>bold</b> 393:19 <b>boosted</b> 362:24 <b>border</b> 271:17 508:13,14 528:4,9,12,25 <b>Borkowski</b> 530:17 535:22 553:9 <b>borne</b> 440:21 <b>bother</b> 480:19 <b>bottom</b> 287:12 287:12,16 341:11 379:5 399:1 403:15	<b>bring</b> 434:18 466:11 <b>bringing</b> 316:10 <b>broken</b> 398:12 <b>Brown</b> 288:24 289:2,3 <b>Brown's</b> 327:21 <b>bucks</b> 384:15 <b>build</b> 308:18,23 310:20 423:2,3 426:14,16 435:15 499:8 505:6 507:22 <b>building</b> 309:25 312:7 428:3 440:11	<b>buried</b> 501:10 <b>Burns</b> 444:10 447:23 476:7 528:1 <b>bury</b> 455:6 487:21 501:6 501:14 503:9 505:23 <b>burying</b> 454:21 455:2 <b>business</b> 549:16
<b>C</b>				
C 272:1 361:19 362:1,4,9,17 362:25 363:11 366:18 375:25 429:25,25 430:7,20 CA 371:22 <b>cable</b> 502:7 <b>cables</b> 506:3 <b>calculate</b> 370:22 <b>calculated</b> 413:24 416:12 <b>calculation</b> 378:10 384:19 385:1 <b>calculations</b> 369:4,5 371:3 371:4 378:2				

384:2,4 488:21 524:13,19 <b>calculator</b> 371:15 383:22 547:1 <b>calculators</b> 372:1 <b>California</b> 356:4 426:8 439:24 <b>call</b> 323:10 326:7 358:14 361:18 368:6 389:5 411:5 474:18 489:3 489:21 490:4 534:7,12,25 535:5,10 541:16 <b>called</b> 286:14 337:9 362:2 368:3 380:10 396:12 397:19 430:4 503:17 <b>calls</b> 387:4 437:12,13 522:4 <b>Campbell-Alli...</b> 447:16 <b>Canada</b> 349:3,3 <b>capability</b> 341:21 <b>capacity</b> 363:9 363:16 369:6,8 369:11 370:7 370:13,23 371:3,7,11 372:3,11 374:7 376:11 377:2,7 377:11 378:4,8 378:19 382:11 382:18 383:1,9 383:14,16,17 384:20 393:14 407:20 408:3	411:4 412:17 412:25 413:7 413:16 414:1 416:14,15 417:3,4 419:12 420:18,18 421:18 425:21 436:18 493:3 501:17 513:10 515:1 <b>capital</b> 305:13 369:17 370:11 370:11,19,23 371:3,6,10 374:7 376:10 376:19,24 377:7 378:4,18 378:24 379:2 381:14,21,24 382:17,20 383:8,17,19,20 409:10,22 410:19 411:24 412:7 413:5 414:18,25 416:7,15 419:9 422:22 431:8,9 513:9 515:1 <b>captured</b> 459:25 <b>captures</b> 460:17 <b>carcinogenity</b> 339:5 <b>career</b> 324:4 <b>Carmel</b> 272:22 <b>Carolina-Cha...</b> 355:22 <b>carries</b> 408:24 <b>cart</b> 311:7,16 326:22 <b>case</b> 275:17 277:7 283:17 283:22 289:3 305:21 308:24 315:17 327:10	328:17 329:10 336:2 345:25 346:4 349:19 349:22 354:6 354:16 356:7,8 357:5 359:21 370:17 374:1,6 374:14,19,22 380:21 381:7 398:19 421:22 425:14 432:6 432:15 440:7 444:17 446:15 447:16 499:7 500:21 504:7 515:17 517:6 523:9 560:4 <b>cases</b> 430:5 <b>cash</b> 313:14,20 <b>categorically</b> 431:1 <b>category</b> 429:23 429:25,25 430:2,3,7,7,20 430:20 431:2 431:17 <b>cathodic</b> 503:8 <b>cause</b> 311:2 324:12 325:14 333:6 408:2 441:18,19 507:12,14 510:19 518:11 <b>caused</b> 305:20 327:10 444:16 484:6,24 493:8 526:5,18 <b>causes</b> 310:14 491:24 <b>CCR</b> 271:24 561:4,18 <b>CD</b> 467:13 517:23 <b>Cedar</b> 436:13	<b>center</b> 272:22 286:13 309:17 309:25,25 310:3,6,8 321:20,24 322:1,12,15,24 323:15 325:20 325:24 326:1,4 <b>central</b> 362:1 <b>CERC</b> 349:17 349:21 351:13 351:19 431:13 <b>certain</b> 309:21 310:23 311:22 323:7,16 330:8 351:20 430:19 484:6,24 493:8 505:17 548:11 548:13,17,17 550:18 552:25 <b>certainly</b> 363:15 375:1 397:17 498:9 537:4 <b>certificate</b> 271:14 550:15 550:21 551:10 561:2 <b>certified</b> 537:10 537:14,18,19 538:16,23 539:5 540:20 560:15,16 <b>certify</b> 561:5 <b>Chairman</b> 271:20 321:6,7 342:9,10 425:5 425:6 426:6 428:18 454:16 454:17,18 458:6,10,19 459:2 460:9 476:16,17 479:1 487:15 487:16 501:1,2	501:4 503:12 514:12,13 522:21,22 545:9,10 547:6 547:11,16,18 550:1 553:9 556:16,17,20 556:23 557:7 557:12 <b>challenge</b> 534:21 <b>chances</b> 430:24 <b>change</b> 317:7 324:19 337:22 338:18 430:11 472:25 504:4,5 504:16 511:12 513:3 <b>changed</b> 328:8 516:12 <b>changes</b> 306:10 306:12 343:7 346:13 445:1 503:14,15 513:24 521:9 <b>Chapter</b> 375:9 398:10 399:11 399:13,16 558:24 <b>characteristic</b> 504:15 <b>characteristics</b> 407:9 430:19 492:4 504:5 <b>characterizati...</b> 289:25 349:9 437:10,20 <b>characterize</b> 289:21 394:23 394:25 414:9 539:10 <b>characterized</b> 414:11 511:11 <b>Charles</b> 288:18 <b>chart</b> 274:13
---	---	--	---	--

392:22 393:25 394:4,9 395:7 395:7,13,20,25 399:1,8 400:15 404:18,19,20 412:4 421:10 438:4 <b>charts</b> 463:19 <b>cheaper</b> 383:11 516:11 <b>check</b> 274:5 290:4 334:2 391:7 413:2,3 459:16 493:12 496:10 <b>checked</b> 274:10 274:11 <b>Chicago</b> 505:15 505:19 <b>choice</b> 440:3 <b>chooses</b> 365:13 440:1 <b>chose</b> 356:9 <b>chosen</b> 459:19 <b>Chouteau</b> 272:8 <b>Chris</b> 458:23 <b>Christopher</b> 444:4,8,15 556:14 558:14 558:15 <b>circle</b> 326:3,6,8 326:13 <b>circuit</b> 501:17 <b>circuits</b> 502:13 <b>citation</b> 400:4 417:22 <b>cite</b> 360:3 369:15,20 394:4 407:21 <b>cited</b> 336:2 337:20 360:21 411:20,25 412:2 <b>city</b> 271:8	272:18,22 273:2,8,14 505:15,16 <b>CJ--</b> 458:12 <b>CJW-01</b> 458:12 458:19,21 463:4 464:6 <b>CJW-SR1</b> 478:17 <b>CJW-SR4</b> 479:14 <b>claim</b> 369:16 500:5 <b>clarification</b> 274:7 346:7 374:13 458:15 511:15 520:7 533:25 <b>clarify</b> 414:4 463:3,14 482:3 531:18 533:1,8 545:21 <b>clarifying</b> 417:16 552:8 <b>class</b> 386:5 502:17 <b>classification</b> 339:3,4,7,8 <b>classroom</b> 432:25,25 <b>clean</b> 403:5 <b>clear</b> 377:13 384:1,18 395:10 396:10 417:12,20 476:4 515:6 544:20 545:2 551:23 <b>cleared</b> 290:7 <b>clearing</b> 471:18 474:4 548:16 <b>clearly</b> 402:23 422:18 547:24 <b>client</b> 432:20	<b>climate</b> 513:4 <b>clock</b> 344:23 <b>clos--</b> 491:12 <b>close</b> 528:15 529:11 <b>closer</b> 491:12 530:4 535:16 <b>closest</b> 475:11 <b>Club</b> 359:20 360:1 <b>co-ops</b> 407:4 <b>coherent</b> 438:14 439:21 <b>Coleman</b> 271:21 317:16 321:14 342:18,19 462:8,9 482:18 482:21 506:13 506:14 514:18 523:2 550:6 <b>collaborate</b> 367:24 <b>collaborative</b> 402:25 403:2 <b>colonies</b> 452:5 <b>colony</b> 452:24 <b>colored</b> 403:9 <b>Columbia</b> 272:4 <b>column</b> 286:16 384:11 399:20 402:16,20 403:15,18 410:17 421:5 536:2 539:13 539:17,24 541:11 542:7 <b>combination</b> 423:4 <b>come</b> 275:2 322:20 343:21 371:23 382:2 382:13 403:7 430:17 433:17 <b>comes</b> 549:20	<b>coming</b> 330:5 436:19 439:24 504:4 <b>comma</b> 353:12 393:13 <b>comment</b> 427:23 448:22 459:21 477:7 <b>comments</b> 380:19 450:20 477:15 478:10 478:13 <b>commercial</b> 341:16 387:10 <b>Commission</b> 271:1 273:7,10 335:9 373:17 374:9,18 461:25 462:5 476:10 505:8,9 512:9 516:16 534:8,11,25 535:6,9,24 536:13 537:11 537:23 538:7 540:2 548:1 549:12 550:15 550:20,22 554:10 559:4 559:17 <b>Commission's</b> 374:1 527:23 <b>commissioned</b> 337:10 <b>commissioner</b> 285:10,14,20 298:1 317:16 317:19 321:9 321:10,12,14 342:11,13,15 342:16,18,19 428:19,20,21 428:22 458:7 458:20 460:10	460:12,13,15 462:2,8,9 464:22 478:20 479:22,23,25 480:9 481:4,6 482:18,21 488:2,4 506:7 506:8,10,11,12 506:14 514:14 514:15,17,18 522:24,25 523:1,2 524:16 533:10 536:9 539:20 550:2,3 550:4,6,13 552:25 556:5 556:16 <b>commissioners</b> 271:22 379:7 471:23 521:21 541:17 542:9 542:11 553:4 <b>commissioners'</b> 540:23 <b>Commissions</b> 535:23 <b>common</b> 323:11 323:12 402:8 455:10,11 489:3 507:9 508:4 <b>communication</b> 448:11 536:11 537:22 538:2,3 538:4,5,7 539:23 542:8 <b>communicatio...</b> 446:19 447:15 447:19 528:20 538:2 <b>communities</b> 477:19,24 482:1 <b>community</b>
--	--	--	--	---

436:15 451:3 459:5,6 476:22 531:11 <b>compaction</b> 310:14 311:2 311:25 326:15 326:17,18,24 327:2,6,9,12 327:15,16 <b>companies</b> 343:19 <b>company</b> 271:13 272:5,11 275:21 277:10 277:10,11 290:5 305:17 324:5 333:3 341:7 444:11 444:13 493:4 521:2 529:5 542:1,2,3 547:22 556:3 <b>comparable</b> 279:10,13 436:8 498:10 498:16 <b>comparative</b> 433:13 438:4 <b>compare</b> 278:6 369:12 438:8 <b>compared</b> 312:11,17 354:13 499:3 516:6,17 523:9 <b>comparing</b> 369:1 498:5 <b>comparison</b> 383:11 419:8 513:10 516:22 <b>comparisons</b> 370:9,11,25 407:23 416:17 <b>compete</b> 435:14 <b>competitiveness</b>	370:5 418:22 <b>complaint</b> 455:11 <b>complete</b> 326:3 <b>completed</b> 277:6 279:6 519:25 520:10,17 <b>completely</b> 515:6 525:4 <b>completing</b> 521:13,16,19 521:22 <b>complex</b> 503:19 <b>comprised</b> 469:4 <b>computer</b> 477:7 <b>conceived</b> 427:19 <b>concentrations</b> 323:2 <b>concern</b> 329:10 471:11 549:18 554:13 <b>concerned</b> 470:22 546:22 550:17 <b>concerning</b> 353:22 543:15 <b>concerns</b> 373:25 374:5 425:20 448:2 465:23 470:6 473:1,3 <b>conclude</b> 362:15 <b>conclusion</b> 513:25 516:9 <b>conclusions</b> 402:24 403:2 437:2 <b>condition</b> 328:25 498:8 <b>conditions</b> 310:12 <b>conduct</b> 499:2 499:19 503:8 <b>conducted</b>	307:11,18,25 308:7,14,22 309:4,12 354:8 354:9 358:24 359:10,13 519:19,22 <b>conductor</b> 501:25 503:15 503:16,16 504:4,6,8,19 <b>conductors</b> 499:9 <b>confer</b> 524:8 <b>confidential</b> 290:4 299:2,7 560:6 <b>configuration</b> 336:16 <b>confine</b> 500:11 <b>confirm</b> 288:1 377:17,23 378:10 389:25 488:14 <b>confirmed</b> 289:6 289:10 365:16 391:5 <b>Congress</b> 337:8 394:10 511:16 <b>connect</b> 366:18 <b>connected</b> 362:9 490:15 <b>Connecticut</b> 286:9,19,22 <b>connection</b> 400:25 530:3,4 <b>consent</b> 542:9 542:12,14 <b>conservation</b> 318:1,7,9,10 318:16 319:23 328:3 329:13 329:20,22 446:20 447:17 448:1,11	450:25 453:18 456:3 465:9 467:25 468:19 470:22 471:14 475:15 476:6 543:22 554:24 <b>Conservation's</b> 449:11 <b>conservationist</b> 329:8 <b>conservative</b> 477:8 <b>conserve</b> 310:10 <b>consider</b> 313:7,8 366:3 387:9 433:10 454:21 474:20 479:18 541:9 <b>consideration</b> 339:1 468:4,8 477:23 478:10 478:13 <b>considerations</b> 468:7 <b>considered</b> 310:9 366:7 433:24 434:1 465:16 <b>considering</b> 337:23 354:22 <b>consistency</b> 349:15 431:14 <b>consistent</b> 328:23 440:4 <b>consisting</b> 275:17 <b>constant</b> 436:4 <b>constraints</b> 456:2,6 465:8 465:11 <b>construct</b> 271:15 456:12 498:9 503:3 <b>constructed</b>	463:12 491:15 523:10 <b>Constructing</b> 287:13 <b>construction</b> 310:19,24 311:2 312:4 327:10,15 329:1 331:23 358:7 425:16 486:21 488:10 493:6 497:12 497:23 512:15 512:23,25 520:16 521:1 523:8 525:3 529:22 548:8 <b>consult</b> 325:8 554:17 <b>consultant</b> 325:3 450:18 541:24 542:2,4 <b>consultation</b> 528:10 <b>consulting</b> 324:5 325:15 400:12 <b>consumers</b> 403:6 <b>CONT'D</b> 559:1 560:1 <b>contact</b> 534:24 <b>contacted</b> 349:20 534:7 534:11,24 535:4,5,9 <b>contacts</b> 535:15 539:13 541:12 <b>contained</b> 276:3 334:9 347:12 445:9 479:24 484:9,15,20 485:8,13 493:15,20 547:9
---	--	--	--	--

401:15	457:22	462:1	341:23 342:1	402:11 405:15
<b>contemporary</b>	<b>controversial</b>	<b>cord</b> 502:7	343:17 344:7,8	405:18 406:2
380:21	360:7,17	<b>core</b> 505:21	344:11 345:7	406:15 407:6,7
<b>contend</b> 422:14	<b>convenience</b>	<b>corn</b> 313:9,10,11	346:9 348:22	407:11,15,17
423:20	271:14 381:12	313:18 327:17	348:24 349:7,8	408:10,14
<b>contended</b>	<b>convenient</b>	<b>corner</b> 364:14	350:4,5,7,8,16	409:3,14,16,17
423:22	418:21 528:11	490:1	350:17,23,24	409:20,24
<b>contention</b>	528:14,17	<b>corollary</b> 382:17	351:2,3,6,7	410:11 411:3,8
392:9 422:17	546:3	<b>Corps</b> 554:17	354:24 355:17	411:20,21
<b>contents</b> 398:9	<b>conversion</b>	<b>correct</b> 274:9,22	355:18 356:21	412:3,14 413:3
<b>context</b> 365:3	380:5,16,20	276:4 277:7,11	357:21,22	413:12,20
374:19 393:23	381:3,10,13	277:17 278:2,4	358:8,11,12,25	414:3,16
542:15	383:16 384:12	278:8,12	359:1,12 360:2	415:22 416:4
<b>contingent</b>	386:13 412:13	279:11,14,18	360:9,19 361:4	417:8,11,24
549:13,23	412:21 413:1	279:23 280:15	361:12,25	418:16,17,18
<b>continuation</b>	416:14 417:1	281:22,25	362:5 366:16	418:24 420:3,6
436:1,2	<b>convert</b> 328:13	282:3,4,6,7,9	366:24 367:19	420:13,14
<b>continue</b> 403:5	380:2 430:6	282:15,16	367:20 368:17	421:2,4,25
435:10 436:3	<b>converting</b>	283:6,24	368:22,25	422:1,4,6,10
436:21	409:15 430:2	284:22,25	369:7,14,21,22	422:13 429:13
<b>continued</b> 343:9	<b>Cooper</b> 541:17	286:5,9,25	370:8,14 371:1	432:11 441:22
343:14 435:22	<b>cooperatives</b>	287:1,5,6	371:14 372:13	442:5 444:14
436:23	361:3,5 366:21	288:19,25	373:21 376:23	444:18,21,22
<b>continues</b>	<b>coordinate</b>	289:3,18,19	377:1,4,9,12	444:25 446:3
363:21 364:24	453:18 543:22	305:18 307:8,9	378:16 379:12	446:16,17,22
<b>continuing</b>	<b>Coordinating</b>	307:12,13,15	379:17,21,23	447:10,18
436:5 497:6	348:20	307:16,19,20	379:24 380:4,6	450:8,13,14
500:1	<b>copies</b> 278:17	307:22,23	380:11,14,17	451:2 453:1
<b>contract</b> 329:1	391:21 392:2	308:2,4,5,8,9	381:17,22,23	455:18 458:13
331:7 356:2,5	461:25 462:1	308:11,12,15	382:8,15 384:5	460:20,22,23
438:10	466:11 480:7	308:16,19,20	384:8,14,17	461:13,18,20
<b>contracted</b>	537:3	308:24,25	385:6 386:2,11	462:23 463:9
361:10	<b>copy</b> 279:5	309:2,3,6,7,9	386:24 388:13	463:10,15,16
<b>contracts</b> 319:2	285:4 335:11	309:10,13,14	388:16 389:7	464:4,18 466:1
319:11,15,19	348:14 349:25	310:6 312:5,18	389:12,18,21	468:22 470:23
320:10,20	356:23 415:6	314:4,9 318:24	390:6,23 392:8	475:3,4,7,8
328:17 331:25	461:21 466:23	319:4,8,20	392:13 393:4,5	482:5,24 484:7
<b>contrary</b> 331:7	537:11,14,18	320:7,12,16,21	393:9,22 394:3	484:10,11
<b>contrast</b> 515:24	538:16,23	321:21 322:6	394:8,17,22	485:3,4 486:14
<b>contributing</b>	539:5 540:21	327:21,22	395:4,10,18,21	486:15,18,19
521:3	560:15,16	333:4,13	395:24 396:8	486:24 487:22
<b>contributors</b>	<b>copyright</b>	334:12 337:21	397:25 398:5	489:16 490:9
400:1,21	480:22,24	339:25 340:8	399:4,18,22	490:22 491:10
<b>control</b> 271:16	<b>copyrighted</b>	340:22,23	400:10,13	495:7,24



496:15,16,21	453:22 495:5	459:22,23,23	339:14 344:6	521:8,8,8,21
496:22 497:1	496:9 497:14	460:3,6 490:23	344:13 348:7	522:1,1,1,2,2,3
497:18,19,21	529:3 541:19	491:5 499:3	348:12 373:15	522:13,13,13
497:25 498:1,4	542:10 543:24	501:14,24	424:20 425:2	522:14,14,16
498:20,24	543:25	502:14,22,23	428:25 442:22	523:23 524:6
499:5,20 500:6	<b>correlation</b>	505:10 513:9,9	446:6 462:15	524:12,16
500:19 508:2	312:21	513:13,15,17	480:19 481:14	531:19,21,23
511:1 515:10	<b>correspondence</b>	514:24,25	483:2,10 486:6	531:24 532:3
515:11,13,14	467:24	515:1,20	494:11 506:21	534:8,11,25
515:20 518:23	<b>corroborate</b>	516:17,21,24	512:9 514:7,22	535:3,4,6,6,8,9
519:20,23	349:18	517:12,14	516:8 525:18	535:14,23,24
520:3,13	<b>cost</b> 313:1	545:14 559:12	530:10 536:10	536:8,9 537:11
521:10,11	353:13 354:10	<b>costly</b> 456:10,11	547:11 555:18	537:23 538:6
528:5,6 529:6	354:22 355:2	<b>costs</b> 313:15	561:10,13	538:17 539:7
531:8,9,17	369:1,2,9,17	314:3 368:15	<b>counseling</b>	539:11,20
532:6,11	370:12,16,19	370:11 371:3	341:22	540:21 541:7,8
534:22 537:24	370:23 371:6	376:10 378:18	<b>Counselor</b> 365:4	541:16,17,18
539:21,22	371:10 374:7	379:2 385:11	533:10	541:18
540:7,18,19,24	376:11,19,19	385:15 386:25	<b>count</b> 458:23	<b>couple</b> 274:3
540:25 541:4	376:24 377:7	387:1,2,11	534:14	335:10 372:25
541:10,20	378:4,4,24	388:1,2,11	<b>countering</b>	373:4 385:4,9
542:6,12	381:14,21,25	391:4 392:10	433:4	410:1 456:16
543:17 544:5	382:17,20	393:21 396:11	<b>counties</b> 323:21	457:6 476:16
544:23,24	383:9,17,19,20	397:5 401:1	324:11 520:13	530:19
545:15,16,18	387:16 393:13	402:6 405:2	521:13,16,19	<b>courses</b> 432:11
551:11 554:1	407:23 408:16	409:22 414:18	521:22 523:9	<b>court</b> 271:24
<b>corrected</b>	409:6,10 410:4	415:25 416:2,7	524:1,5 531:22	279:2 281:15
330:19	410:19 411:24	419:9,10,18	537:24 552:25	525:19 539:2,4
<b>correction</b>	412:7 413:5,5	422:22 431:20	553:5	<b>cover</b> 398:8
346:21	413:15 414:14	433:10 436:1	<b>country</b> 328:21	406:13
<b>corrections</b>	414:25 416:15	491:15 497:8	349:14 501:10	<b>CP</b> 440:10
275:22 333:10	416:17,19,23	499:2 500:6,17	505:12	<b>CPCN</b> 440:10
334:6,11	416:24 417:2	516:10 517:8	<b>county</b> 279:22	<b>crane</b> 326:19
346:15 347:8,8	418:10,20	521:9 545:17	282:11 283:24	<b>create</b> 289:12
441:23 445:8	419:4,8,12,24	545:20 546:17	288:19 307:8	527:25
484:12 485:5	425:19,20	<b>Council</b> 348:20	307:11,15,18	<b>creates</b> 497:9
493:13 510:23	431:8,9 433:13	<b>counsel</b> 273:4,5	307:22,25	<b>credibility</b> 435:1
511:5 518:16	433:15 435:13	273:5,6,6,11	308:4,7,11,14	<b>credit</b> 394:11,12
526:11,24	436:4,23 438:9	273:12,12,15	319:10,12,14	394:15 435:21
<b>correctly</b> 289:15	438:13,23,24	274:2,3,5,8,11	320:18 324:4	512:14,18,20
335:20 336:5	439:11,12,14	274:25 276:25	330:17 331:6	512:21 513:1,2
337:17 341:17	439:15,16	280:6 298:20	452:3,15	513:4,4,12,18
365:1,17 414:9	440:13,17,21	307:1 332:5	519:20 520:2,9	515:13,15
434:17 452:25	455:5 459:20	335:9 339:12	520:25 521:7,7	516:1 517:6

<b>credits</b> 511:12 511:16 512:12 514:23 <b>Creek</b> 366:8 <b>creeks</b> 323:10 <b>CRF</b> 531:12 532:2 <b>cricks</b> 323:10 <b>criteria</b> 349:14 477:21 508:24 <b>criterion</b> 349:18 430:12,22 <b>crop</b> 311:25 312:21,24 313:4,11,12,14 314:15,16 315:2 316:15 316:18,20,24 317:3,9,11 323:4 325:3,15 327:6,11,13,17 328:13,14 330:22 478:3 <b>crop's</b> 313:8 <b>crops</b> 316:11,11 328:10 <b>cross</b> 284:3,9 309:23 318:5 318:22 319:2 320:5,11 332:11 339:12 339:18 347:21 348:8 446:2 467:4 475:17 479:15 514:4,8 519:9 527:17 528:4 530:8 550:8 <b>cross-examina...</b> 276:13,19 277:4 306:18 306:22 307:4 323:19 334:18 334:24 335:7	339:22 348:6 348:10 352:23 356:17 424:25 432:18 442:10 442:17 445:20 446:1,9 485:20 486:1,10 493:25 494:6 494:15 511:23 512:4,7 519:3 519:17 527:11 527:19 530:13 556:5,8,11,11 556:15,20,23 557:1,3,6,6,11 557:11,12 <b>crosscheck</b> 476:24 <b>crossed</b> 284:12 287:4 448:7 473:25 <b>crosses</b> 284:7 314:22 487:1,5 498:19,23 <b>crossing</b> 310:21 468:11 469:22 470:8 472:4 499:4 <b>CRP</b> 318:4,15 318:16,21 319:1,7,11,15 321:1 327:24 328:3,17,19,20 328:22 329:16 329:25 331:12 331:14,18 <b>CSP</b> 320:1,4,9 320:15,20 321:1 331:21 <b>culture</b> 456:3 465:10 473:3 <b>curious</b> 456:23 457:1,3,10,11 <b>current</b> 336:19	338:6 379:19 380:1 388:2,11 404:6 436:3 440:1,4 <b>currently</b> 347:2 405:16 500:10 <b>curve</b> 405:3 <b>customers</b> 366:20 431:7 <b>cut</b> 392:1 434:12 435:8 455:14 455:19,20 466:5 <b>cuts</b> 455:12 <b>cutting</b> 465:2 <b>CV</b> 343:15 <b>cycle</b> 360:7 <hr/> <b>D</b> <hr/> <b>D</b> 271:19 430:2 430:7,20 431:2 431:17 <b>D-e</b> 305:13 <b>damage</b> 314:16 315:2 316:20 316:22 317:4 317:11 <b>damaging</b> 317:8 <b>DANIEL</b> 271:20 <b>dark</b> 470:17 <b>data</b> 278:11 281:20 368:15 386:17,18 395:25 399:7 401:10 408:16 420:17 422:3 447:10 451:15 466:21 468:15 532:24 533:7 536:5 537:21 538:1,8 539:14 539:24 540:5 540:16 541:13 543:8,19	544:11 551:21 559:15 560:3,9 560:10,12,13 560:18 <b>date</b> 430:10 529:18 538:3 539:18 546:8 <b>Dave</b> 456:14 <b>David</b> 272:12 483:18,24 484:5,23 556:19 558:11 558:12 <b>day</b> 435:17 436:19 492:5 525:14 555:10 <b>days</b> 326:4 <b>DC</b> 338:11 379:23,25 380:2 381:14 381:21 383:16 384:12 385:15 385:15 409:11 409:12 412:7 412:12,25 416:13 <b>DC-based</b> 337:23 <b>DC/AC</b> 380:15 381:2 <b>DE-01</b> 484:10 <b>DE-02</b> 484:10 <b>DE-03</b> 484:10 <b>DE-SR-1</b> 485:3 <b>dead-end</b> 490:13 491:11,21 492:2,7 <b>dead-ended</b> 489:13 490:14 491:24 <b>dead-ends</b> 490:11 <b>deal</b> 373:13 438:15 481:1	<b>Dearmont</b> 272:7 483:16,17,19 485:17 488:6 492:20,21,23 493:23 507:7,8 556:19,21,22 556:24 <b>decades</b> 403:7 <b>December</b> 430:13 451:19 <b>decide</b> 316:21 462:4,4 <b>decision</b> 317:12 523:25 549:17 550:19 <b>decline</b> 436:5,23 <b>declining</b> 392:25 414:22 517:11 517:12 <b>decrease</b> 335:18 525:4,6 <b>decreases</b> 311:25 335:17 <b>deep</b> 326:11 492:3 <b>Deere</b> 310:21,25 311:3 <b>deferred</b> 490:25 553:9 <b>deficiencies</b> 373:25 374:2,5 <b>definitely</b> 468:6 <b>degradation</b> 433:23,23 <b>degree</b> 287:19 288:4 340:3 355:20,24,24 355:25 <b>degrees</b> 489:23 <b>DeJoia</b> 274:17 305:1,3,9,11 305:14,19 306:5 321:19 327:5 330:16
---	---	--	--	---

332:4 556:7 558:6 <b>DeJoia's</b> 329:24 <b>delegated</b> 349:13 <b>delete</b> 346:22 347:7 <b>delineation</b> 359:11 <b>delivered</b> 366:19 <b>demand</b> 358:15 360:5,12,17,18 404:1 425:23 <b>demand-side</b> 358:24 425:22 <b>demonstrate</b> 403:3 <b>denied</b> 432:22 <b>Dennis</b> 555:13 <b>dense</b> 505:21 <b>DEO</b> 367:18 <b>department</b> 317:25 319:22 320:23 367:18 389:6 397:19 446:20 447:17 448:1,11 449:11 450:17 450:19,24 451:20 453:18 467:25 468:18 470:21 471:14 475:14 476:6 484:4 543:21 554:23 <b>depend</b> 338:20 <b>dependent</b> 551:8 <b>depending</b> 310:3 310:5 317:9 332:11 382:19 433:20 463:21 492:4 <b>depends</b> 316:24 316:25 501:16	<b>depicting</b> 399:7 <b>Deployment</b> 401:18 <b>deposition</b> 356:23 360:14 362:24 364:1 365:11,17 434:2,7,18 <b>depth</b> 327:17 <b>Deputy</b> 273:4 <b>describe</b> 481:24 512:12 513:5 <b>described</b> 498:10 507:11 <b>describing</b> 499:7 <b>description</b> 509:10 <b>design</b> 288:19 310:6 321:23 356:9 456:11 <b>designed</b> 357:20 367:23 492:1 <b>designer</b> 357:25 432:1 <b>designing</b> 358:19 <b>designs</b> 322:9 <b>despite</b> 508:6 <b>destroy</b> 323:3 <b>detail</b> 467:2 <b>detailed</b> 402:9 461:3 496:19 <b>details</b> 415:3 <b>determination</b> 349:21 <b>determine</b> 278:7 318:4,15,21 320:4 351:13 495:10 523:21 <b>determined</b> 431:17 <b>deterministic</b> 429:25 <b>develop</b> 366:8	366:13,15,17 <b>developed</b> 337:8 365:21,24 <b>developer</b> 356:3 356:5 <b>developers</b> 341:14,14 406:8 <b>developing</b> 318:3,14,20,25 319:5,9 320:3 320:8,13,17 <b>development</b> 281:6 355:25 356:3 363:20 363:21,24 364:20,23,24 366:4 367:25 <b>devices</b> 426:19 426:23 <b>diagnose</b> 340:21 <b>diagonal</b> 309:22 331:15 455:14 455:19,20 456:5 464:23 465:13,17,20 465:21 <b>diagonally</b> 284:7 284:9,12 287:5 315:14 455:12 465:2 466:6 <b>diameter</b> 492:3 <b>diameters</b> 393:14 <b>diesel</b> 313:15 <b>difference</b> 338:13,15 383:2 504:20 <b>differences</b> 426:3 <b>different</b> 313:9 313:10,10,22 324:18 325:17 325:19 328:9	328:21 338:3 338:23 359:21 369:11 418:23 426:20 428:15 430:5 435:17 457:19 458:18 473:19 475:23 499:24 516:21 531:11,17 532:15 555:3 <b>differential</b> 455:6 <b>differently</b> 338:10 <b>difficult</b> 323:14 472:23 <b>diligently</b> 554:21 <b>diminish</b> 336:11 <b>direct</b> 275:12 305:8 332:21 345:16 388:4 408:23 420:15 441:14 444:5 444:16,19 445:3,13 457:6 458:4,7,9 460:16 483:19 484:6,13,20,24 492:23 510:13 513:6 518:7 525:24 526:6,8 527:6,9 545:13 556:4,8,10,13 556:15,19,22 557:3,5,10 558:11,14,20 <b>directed</b> 368:4 437:2 <b>direction</b> 541:21 542:22,23 544:2 561:9 <b>directly</b> 280:21 343:11 362:25	<b>director</b> 329:6 493:5 <b>directors</b> 426:24 430:11 <b>disagree</b> 418:25 439:6,8 535:18 <b>disagreed</b> 325:22 326:17 <b>disagreement</b> 274:6 426:2 <b>disbelieve</b> 534:18 <b>discuss</b> 280:13 283:2,3,17 284:20 314:8 348:19 358:13 450:19 <b>discussed</b> 382:16 439:15 531:13 536:12 540:1 542:9,11 543:13,14 <b>discusses</b> 314:2 354:7 361:14 451:25 <b>discussing</b> 336:1 <b>discussion</b> 315:12 380:25 547:21 <b>disjointed</b> 391:11 <b>disorders</b> 343:8 <b>dispute</b> 289:21 357:14,17 <b>disputing</b> 384:3 <b>distance</b> 335:19 336:3,11,14,21 478:1 <b>distribution</b> 502:13 <b>divide</b> 326:20 371:12 378:8 378:10,18 412:12 413:18
---	--	--	--	--

<p><b>divided</b> 326:21 383:4 547:2 <b>dividing</b> 371:7 <b>division</b> 389:5 455:25 465:6 <b>docket</b> 373:24 375:2 441:19 510:20 518:12 526:6,19 <b>doctor</b> 340:19 342:25 <b>Doctrine</b> 481:1 <b>document</b> 279:3 279:10 281:16 286:13 341:5,8 367:13 374:14 388:19 406:14 406:23 429:22 433:17 436:25 437:11,15,17 437:22,24 438:19 447:6,8 447:14 450:15 451:13 453:3 495:21 513:17 531:5 532:21 532:25 533:23 534:1,3,5 537:8 538:12 538:13 539:14 540:14 543:6 543:13 <b>documentation</b> 420:11 538:5 <b>documented</b> 452:14 <b>documents</b> 346:11,14 374:4,4,16 416:21 433:8 438:3,6,7 559:13 <b>DOE</b> 367:17,23 368:3 369:19</p>	<p>369:20 388:2 388:10,14 389:9 394:24 395:1,10,13,14 395:14,17,22 396:6,10 397:4 398:1 400:15 401:24 405:23 405:24 406:5 407:24 410:7 410:20 411:6 417:10,14,15 417:16 418:20 437:15,17 438:6 513:15 515:25 517:9 <b>DOE's</b> 367:21 396:1 401:21 403:23 515:8 <b>doing</b> 316:15 325:17 415:20 455:1 508:16 527:21 550:16 <b>dollar</b> 346:23,24 347:3,4 371:6 431:4 433:3,3 436:10 503:1 512:17 516:23 517:13 <b>dollars</b> 409:10 409:12 431:8 439:16,17,18 439:19,24,25 440:2 491:18 513:19,20,22 515:16,18,21 515:22 517:2,7 545:14 546:18 <b>double</b> 290:3 429:20 430:25 <b>doubled</b> 504:18 <b>doubling</b> 504:12 <b>doubt</b> 534:17 535:2,7,12</p>	<p>544:12 <b>Doug</b> 288:24 289:2 <b>downward</b> 393:12 <b>dozen</b> 427:12 <b>Dr</b> 274:20 332:6 332:8,10 334:18 335:8 337:22 339:23 342:23 344:3 461:23 463:25 532:23 534:2,3 553:23 555:14 <b>DR-0057</b> 495:23 <b>draft</b> 538:22 <b>draw</b> 315:7,17 <b>drawing</b> 316:8 <b>drawn</b> 331:15 <b>Drive</b> 272:18,22 <b>driven</b> 393:20 <b>drives</b> 355:4 <b>drop</b> 393:7 405:3 528:18 <b>Duke</b> 355:21 <b>duly</b> 561:6 <b>Dura</b> 305:15 <b>DUSTIN</b> 273:12</p> <hr/> <p style="text-align: center;"><b>E</b></p> <hr/> <p><b>E</b> 272:1,1 345:24 346:8 <b>e-mail</b> 531:10,18 531:21 534:8 534:12 535:1,5 535:10 <b>e-mails</b> 274:3 <b>EA-2015-0146</b> 271:15 275:17 <b>Eagan</b> 536:8 <b>EAI</b> 422:9 <b>earlier</b> 318:8 329:3 376:1 378:1 385:5</p>	<p>405:19 406:5 416:4 417:21 436:6 490:24 538:22 542:17 543:14 548:12 <b>Earth</b> 461:13 <b>easement</b> 277:16 279:16,20 283:22 284:22 287:2 288:10 289:23 315:18 329:19 467:4 503:6 545:17 545:20 <b>easements</b> 286:2 465:9 525:5,7 545:25 546:9 <b>east</b> 479:7 <b>eastern</b> 349:17 <b>easternmost</b> 445:7 <b>easy</b> 502:12 <b>economic</b> 353:11 355:4 425:17 438:15 <b>economics</b> 359:24 506:1 <b>Ed</b> 272:8 525:20 <b>edge</b> 472:11,13 474:5,17 <b>edit</b> 347:6 <b>education</b> 343:3 358:5,18 <b>educational</b> 355:15 358:22 <b>Edward</b> 345:15 345:21 <b>effect</b> 313:1 327:6,13 520:22 <b>effective</b> 440:13 440:17 <b>effectively</b> 434:17</p>	<p><b>effects</b> 343:4 <b>effectuating</b> 513:12 <b>efficiency</b> 358:14,20 360:6 407:14 <b>efficient</b> 310:9 <b>efficiently</b> 432:16 <b>effort</b> 402:25 403:3 437:25 528:13 <b>efforts</b> 453:18 477:18,19 504:1 543:22 <b>EIA</b> 389:1,4 395:16,19 418:11 420:12 421:23 422:13 422:15,20 438:17,22 439:9,12,13 440:1 <b>EIA's</b> 417:22 420:17 422:18 439:6 <b>eight</b> 349:12 450:3 <b>either</b> 315:18 316:19 346:13 372:18 416:10 445:1 450:24 478:18 503:15 524:16 534:7 534:11,24,25 535:4,10 <b>electric</b> 271:16 284:21 335:18 336:10 337:12 337:23 338:2,7 343:23 358:9 426:12 467:5 495:10 <b>Electric's</b> 408:15</p>
---	--	--	---	--

<b>electricity</b> 348:20 403:6 404:1 502:1,4 502:18 503:14 503:17 504:21	483:25 484:5 484:23 485:16 485:19 486:11 488:8 492:14 556:19 558:11 558:12	444:10 484:4 496:19 548:24 549:4	380:3 382:12 383:20 515:16	<b>estimates</b> 365:22 365:25,25 374:24 386:22 517:10,12
<b>electromagnetic</b> 337:24	<b>Endorf's</b> 483:9	<b>Engineers</b> 554:17	<b>equaled</b> 423:4	<b>evaluate</b> 286:24 351:19 432:5 432:14
<b>electronic</b> 480:4 480:16	<b>ends</b> 528:21	<b>enhanced</b> 328:8	<b>equals</b> 313:5	<b>evaluated</b> 286:5 357:24 388:1,1 388:10,14
<b>electronically</b> 480:2,6,14	<b>energized</b> 520:17	<b>enjoyment</b> 289:13	<b>equate</b> 381:21 384:23	<b>evaluating</b> 433:11
<b>elephant</b> 425:10	<b>energy</b> 341:13 358:14,19	<b>enter</b> 314:17	<b>equates</b> 375:24 379:15 380:1 381:14 386:9	<b>evaluation</b> 287:13 388:2 388:11,14
<b>ELF</b> 337:2,3	359:23 360:6	<b>entering</b> 315:3 374:2 419:18	<b>equipment</b> 310:19,24 311:2,5,14 316:10 326:23 327:4 496:6,20	<b>evening</b> 531:16 532:9
<b>eliminates</b> 431:21	361:7 367:19	419:22	<b>equivalent</b> 417:3	<b>event</b> 507:12
<b>embedded</b> 366:22	368:23 370:16	<b>entire</b> 322:4 327:3 367:13 374:14,18,21 375:2 397:12 398:9 406:23 432:17 449:14 461:16 505:16	<b>erase</b> 481:4	<b>events</b> 431:2 507:12
<b>emergency</b> 331:1	376:11 388:19 388:21 389:6	454:11 455:11	<b>erect</b> 486:13 497:17	<b>everybody</b> 478:4 478:7
<b>EMF</b> 338:18 341:21 343:4 343:18	390:17 391:17 397:19 400:5 401:7,18 403:24 408:13 417:22 418:10 418:13,20 419:4,8,25 420:12,17 421:18 435:14 440:13 505:17 513:13,16,17 514:24,25 516:21 559:13	<b>entirely</b> 338:20	<b>erecting</b> 486:23 497:13,24	<b>everyone's</b> 325:18
<b>employed</b> 305:14 330:4 332:25 345:22 358:9 444:9 483:25 493:2 561:10,13	<b>enforce</b> 319:11 319:15,16 320:19	<b>entities</b> 349:12 349:16 366:21	<b>ERIC</b> 272:7	<b>everything's</b> 313:13
<b>employee</b> 314:5 538:3 544:2 561:13	<b>entitled</b> 365:10 409:2	<b>entirely</b> 338:20	<b>erodable</b> 328:5 328:12	<b>evidence</b> 306:17 334:23 344:21 348:5 352:18 424:14 442:14 442:16 445:18 445:25 449:24 454:14 467:21 485:25 494:5 507:5 510:5 512:3 519:8 526:6,19 527:16 545:7 556:3 557:9
<b>employees</b> 288:22	421:18 435:14 440:13 505:17 513:13,16,17 514:24,25 516:21 559:13	<b>entity</b> 380:10 431:13	<b>errors</b> 333:12	<b>event</b> 507:12
<b>enable</b> 362:8	<b>enforce</b> 319:11 319:15,16 320:19	<b>environment</b> 338:15 433:20	<b>ES</b> 399:3	<b>events</b> 431:2 507:12
<b>encouraging</b> 355:25	<b>enforcement</b> 330:19,21 349:13	<b>environmental</b> 305:15 320:24 341:20 355:17 433:7 440:18 446:15,18 548:11,22,25 549:5	<b>escorted</b> 553:20 553:22	<b>everybody</b> 478:4 478:7
<b>end-use</b> 404:1	<b>engage</b> 486:21 497:11,22	<b>entity</b> 380:10 431:13	<b>especially</b> 323:8 435:11 472:20 554:22	<b>everyone's</b> 325:18
<b>endangered</b> 359:13 452:5 452:13	<b>engaged</b> 541:24	<b>environment</b> 338:15 433:20	<b>essentially</b> 378:3 393:25 439:10 528:20 549:7 549:17 554:17	<b>everything's</b> 313:13
<b>ended</b> 516:23	<b>engineer</b> 484:3	<b>environmental</b> 305:15 320:24 341:20 355:17 433:7 440:18 446:15,18 548:11,22,25 549:5	<b>establish</b> 430:18	<b>evidence</b> 306:17 334:23 344:21 348:5 352:18 424:14 442:14 442:16 445:18 445:25 449:24 454:14 467:21 485:25 494:5 507:5 510:5 512:3 519:8 526:6,19 527:16 545:7 556:3 557:9
<b>Endorf</b> 274:23 456:14 482:24 483:12,18,24	<b>engineered</b> 491:14	<b>EO-2015-0084</b> 373:24	<b>established</b> 281:6 331:8	<b>Evidentiary</b> 271:6
	<b>engineering</b> 345:23 372:1	<b>epidemiology</b> 336:20	<b>estimated</b> 439:16 520:18	<b>exact</b> 455:15 476:19 491:18 529:18 539:3

547:8	<b>exclusive</b> 340:10	400:18 402:3,5	552:19 553:6	491:22 492:8
<b>exactly</b> 313:13	<b>excuse</b> 317:16	406:16,19,22	554:2 558:1,3	502:11,24
375:21 423:15	332:10 356:14	407:1 408:12	558:4,6,7,9,10	<b>exper--</b> 325:16
528:12	364:7,19 377:6	408:20 409:25	558:12,13,15	<b>experience</b>
<b>exam--</b> 527:8	385:8 398:21	411:12,14,17	558:16,18,19	309:9 312:14
<b>examination</b>	421:13 525:14	412:6 417:25	558:21,22,24	325:12 343:5
275:12 305:8	552:19	418:3,7 420:4	559:2,4,5,7,8	343:22 355:23
321:17 332:21	<b>excused</b> 344:4	420:7,10,16	559:10,11,13	358:19 432:4,7
342:22 345:16	<b>executive</b> 350:22	429:12,12,15	559:14,16,18	432:8 516:25
429:10 441:14	398:19 402:13	429:21 430:4	559:21,22,24	<b>expert</b> 313:25
444:5 463:2	404:9,16	436:24 438:16	560:2,4,5,7,8	325:5 359:16
481:19 483:19	559:19	438:21 439:11	560:10,11,13	366:4 433:25
488:6 492:23	<b>exercise</b> 383:23	441:21 442:9	560:14,16,17	<b>expertise</b> 343:18
507:8 510:13	<b>exerted</b> 393:12	442:13,15	<b>exhibits</b> 348:2,4	<b>experts</b> 426:2,5
514:21 518:7	<b>exhibit</b> 275:18	444:20,24	372:25 373:17	<b>expiration</b>
523:5 525:24	276:12,16,17	447:3,7 449:14	388:23 391:13	511:11
530:17 552:17	278:18,23	449:18,19,23	424:10,11,13	<b>explain</b> 407:20
556:4,6,8,9,10	279:2 281:11	451:9,13 454:8	438:20,23	428:6 429:16
556:12,13,15	281:15 283:10	454:12,13	439:9,9 445:18	456:8 471:10
556:17,18,19	283:14 290:2	466:20 467:16	445:24 485:19	496:2 513:3
556:21,22,24	305:24 306:1	467:20 468:14	485:24 527:15	516:15
557:1,3,4,5,8	306:17,19,21	468:14 469:13	532:15 545:6	<b>explanation</b>
557:10,13	333:8 334:17	469:15,19,20	551:24 559:1	328:1 434:18
<b>examining</b> 433:4	334:19,21,22	475:6 479:24	560:1	506:9
<b>example</b> 280:12	341:1,5 344:15	480:8 483:6	<b>existing</b> 321:24	<b>explicit</b> 377:13
281:2,2 283:2	344:17,19,20	484:7,25 493:9	321:25 361:22	<b>Exponent</b> 333:1
283:17,20	346:1,4 347:20	493:10,25	455:25 465:24	341:25
298:9 299:2	349:24 350:3	494:1,3,4	466:5 496:4,8	<b>export</b> 363:1
315:7 357:16	350:18 352:13	495:17,21	496:14 500:18	<b>exposed</b> 343:12
368:18,21	352:17 353:8	506:25 507:4	507:23	<b>exposure</b> 336:4
371:10 378:5	360:14 367:6,8	509:24 510:4	<b>exorbitant</b>	337:11
387:2 433:19	367:12,22	510:21 511:8	505:10	<b>expressed</b>
433:22 436:12	368:14 370:2	511:22,24	<b>expands</b> 403:23	379:23
498:2 541:7	373:6,10 375:3	512:1,2 515:25	<b>expect</b> 364:24	<b>extended</b> 394:10
548:2,12 560:4	375:13,14	517:23 518:13	365:6 372:14	394:12,15
<b>examples</b> 298:3	376:4,9 379:8	519:2,4,6,7	405:13,16	512:15,22
<b>excellent</b> 426:6	379:23 380:13	526:7,15,22	<b>expectation</b>	<b>extension</b>
<b>exception</b>	385:7,8 386:17	531:1,5 533:11	405:25	394:19 502:7
511:10	388:21 389:20	533:12 535:20	<b>expected</b> 404:21	511:16 512:11
<b>excerpt</b> 392:16	389:22,25	536:25 537:7	414:18,25	512:13
406:12,23	391:14,16	540:10,14	420:25 421:3	<b>extensions</b>
<b>exchange</b> 436:6	392:1,12,15	543:2,6,14	422:8,11	511:13
<b>exchanged</b>	394:1 396:17	544:21,21	<b>expensive</b>	<b>extent</b> 494:25
538:6	397:2 399:11	552:2,5,19,19	416:19 491:21	511:11

<b>extra</b> 325:16 502:16	288:4,6 351:1 369:8,11 370:7 370:13,15 371:4 374:7 376:11 382:18 383:17 393:15 417:3,4 419:12 457:4,8 460:3 468:10 499:24	<b>far</b> 326:23 458:24 459:22 460:5 479:2 489:8 490:2 500:13 550:17 554:13 555:16	470:14 <b>feet</b> 423:12,14 423:21 492:3 500:9 <b>fell</b> 385:20 <b>fence</b> 455:24 465:5 <b>Fenton</b> 272:13 <b>fewer</b> 465:17 <b>fiber</b> 528:17 <b>field</b> 311:8,17 316:25 317:6,8 322:18 336:4 336:10,10,15 336:22 337:3 343:23 <b>fields</b> 335:18,18 337:11,13,23 337:24 338:2,7 338:8,12,14,19 338:21,24 339:4 343:13 <b>fifth</b> 453:13 <b>figure</b> 378:2,3 379:25 380:1 382:14,23 383:1 384:9 394:23,24 399:3 404:25 412:10 420:24 545:24 <b>figures</b> 360:21 382:17 386:2 435:21 <b>file</b> 271:14 329:25 480:4 <b>filed</b> 275:16,23 348:3 441:19 484:6,24 493:8 555:12 <b>filing</b> 373:19,22 510:20 518:12 526:6 559:3 <b>filled</b> 538:16	539:6 <b>final</b> 278:10,12 322:5,6,14 451:1 452:10 453:19 454:1 465:15,17 468:24 469:8 470:2,21 473:18 474:8 474:16 475:10 475:11 543:23 544:4 548:9,21 <b>finally</b> 511:3 <b>Finance</b> 400:5 <b>financially</b> 561:14 <b>financing</b> 419:12 <b>find</b> 332:13 398:11 410:19 455:3 456:23 456:23 457:8 460:25 463:6 463:18 464:2,8 464:16 487:20 547:14 <b>fine</b> 314:12 387:19 391:1 397:18 412:22 461:5 537:4 <b>finished</b> 424:25 481:5 <b>fire</b> 351:15 <b>Firm</b> 272:17 <b>first</b> 274:8 281:2 298:4,5,9 327:24 333:14 341:12 373:12 373:13 402:15 402:16,18,20 415:14 428:14 433:12 463:5 464:11,13 470:24 471:10
<b>Eye</b> 366:8		<b>farm</b> 298:6 310:13 317:6,8 317:10,12 326:23 419:22 433:24 <b>farmed</b> 307:8,15 307:22 308:3 308:10,18 309:1 323:20 324:10,21 <b>farmer</b> 309:18 316:21 <b>farmers</b> 325:5,6 326:10,10 <b>farming</b> 284:3 309:16 312:7 317:9 324:25 325:10,12 487:2 488:15 498:20 499:4 521:9 <b>farmland</b> 433:23 477:20 <b>farms</b> 289:11,14 <b>farther</b> 335:17 <b>fashion</b> 430:1 <b>fast</b> 388:23 <b>favorable</b> 547:25 549:13 <b>fear</b> 289:22 <b>feasibility</b> 341:16 <b>federal</b> 328:22 331:2,9 343:21 554:18 555:2 <b>federally</b> 452:2 <b>feedback</b> 479:19 <b>feel</b> 432:24		
<b>F</b>				
<b>facilitate</b> 440:11 <b>facilities</b> 383:15 383:18 423:18 <b>facility</b> 383:14 419:23 423:2,3 423:9 516:25 <b>fact</b> 324:10 342:24 360:10 366:14 374:4 376:7 385:2 390:4 395:13 404:8 408:6 434:24 438:14 496:18 514:24 <b>factor</b> 351:4,5 363:9,16 369:6 370:23 371:7 371:11 372:3 372:11 377:2,8 377:11 378:8 378:19 380:5 381:11,13,19 382:11 383:1 383:10,14,16 384:20 407:21 408:3 411:4 412:13,17,21 412:25 413:1,7 413:16 414:1 416:14,16 436:18 459:24 460:1 513:10 515:2 <b>factors</b> 287:18	<b>facts</b> 360:21 <b>fail</b> 507:13 <b>failure</b> 360:5,16 430:24,25 507:10 508:4 <b>fair</b> 278:7 289:25 349:9 354:15 357:12 357:13 366:12 366:15 368:1,7 370:20,21 372:22,23 395:16 397:6,7 400:22,23 404:20 409:23 423:25 463:22 463:23 467:13 467:14 480:25 498:17 508:9 508:10 <b>fairly</b> 503:6 <b>fall</b> 469:7 470:1 <b>falling</b> 507:19 <b>falls</b> 436:13 480:25 <b>familiar</b> 323:24 328:18 351:8 353:21 368:8 368:10 394:20 394:22 401:20 407:9 426:9 542:18 <b>familiarity</b> 324:25 <b>family</b> 489:3			

479:3,3 511:2 516:2 <b>Fish</b> 446:21 450:19,25 451:21 475:25 476:5 543:12 543:15,20 551:4 554:23 <b>fit</b> 436:19 529:10 <b>Fitzhenry</b> 272:8 525:19,20,21 525:24 527:5 533:3,9 538:20 541:1 547:13 552:16,17 557:8 <b>Fitzhenry525</b> 557:5 <b>five</b> 312:15 323:20 324:11 339:19 344:24 364:20 449:1 450:11 452:23 453:12 509:5 <b>fixed</b> 370:17 372:4,10,15,19 382:12 419:11 <b>flat</b> 414:21,22 <b>flexibility</b> 548:3 548:4 <b>flip</b> 408:11 409:5 <b>flood</b> 351:14 <b>floors</b> 505:16 <b>flow</b> 323:6 336:19 <b>flowing</b> 503:14 <b>flown</b> 461:14 <b>fly</b> 314:24 461:16 <b>flying</b> 309:9 <b>focus</b> 420:23,24 427:3 <b>focused</b> 358:14	386:20 <b>folks</b> 367:24 368:23 479:13 <b>follow</b> 375:12 455:23 465:5 489:8 553:8 <b>follow-up</b> 310:18 464:22 <b>followed</b> 279:22 287:3 <b>following</b> 349:2 364:17 378:11 448:23 463:4,8 555:15 <b>follows</b> 275:11 332:20 345:15 441:13 444:4 483:18 492:22 510:12 518:6 525:23 <b>font</b> 403:9 <b>foot</b> 377:5 437:25 503:5 <b>footprint</b> 348:23 <b>footprints</b> 348:25 <b>force</b> 327:1 536:9 <b>forcing</b> 327:2 <b>forecast</b> 384:12 395:19,22,23 <b>forecasts</b> 395:6 395:8,12 <b>foregoing</b> 561:6 <b>forest</b> 448:3,12 448:20,23 450:7,13 456:2 472:9 473:13 474:6 <b>forested</b> 448:7 465:8 468:11 469:23 470:6,8 472:6,22,25 473:15,22,25	<b>forester</b> 359:8 <b>forgot</b> 325:21 344:15 398:16 509:24 <b>form</b> 354:17 440:13 458:18 538:4 <b>formal</b> 349:19 <b>forth</b> 428:13 526:15 554:9 <b>forum</b> 459:5,6 <b>forward</b> 275:3 330:4 363:23 416:5 425:11 437:25 438:1 <b>fossil-based</b> 368:6 <b>found</b> 336:21 <b>foundation</b> 311:10 324:16 324:19 486:17 486:23 491:20 492:1,3 497:11 497:13,20,24 502:22 <b>four</b> 280:24 364:10 402:16 402:20 434:6 450:7 453:12 482:8,10 491:19,19 492:7 509:3 551:24 553:22 <b>fourth</b> 341:19 <b>fraction</b> 438:11 <b>fragment</b> 448:12 448:23 <b>fragmentation</b> 468:19 470:22 471:16,20 472:10 473:13 474:7,19,21 <b>fragmented</b> 448:3 468:20	471:19 472:17 474:15 <b>fragmenting</b> 470:6 <b>frame</b> 405:12 <b>free</b> 330:23 331:3 <b>frequencies</b> 337:3 338:24 338:25 <b>frequency</b> 338:4 338:13 <b>frequent</b> 455:11 <b>front</b> 280:1 348:15 411:22 418:7 434:3 447:6 451:12 468:14 494:19 531:4 <b>FSA</b> 329:24 331:8 <b>fuel</b> 313:15 419:10 <b>full</b> 275:13 305:10 312:10 326:13 327:17 385:8 390:1,3 390:15 392:16 393:6 396:3 397:11 418:19 444:7 <b>function</b> 340:6 358:11 426:11 <b>functions</b> 340:16 <b>fundamentally</b> 354:20 <b>funneled</b> 426:15 <b>further</b> 274:25 321:3 339:9 344:22 345:8 349:4 352:12 356:12 393:15 425:2 460:8 476:17 481:9	481:19 483:1 483:10 485:17 492:13 493:23 500:12,23 509:16 517:17 522:19 525:9 530:6 531:25 544:13 549:25 555:18 556:17 561:12 <b>Furthermore</b> 452:20,22 <b>future</b> 309:18 322:8,12 369:18 391:5 392:10 403:10 404:24 405:5 420:19 435:19 435:23 436:1 437:5 516:12 516:18 517:11
<b>G</b>				
<b>G</b> 398:10,14 401:14 <b>G.2.2</b> 408:23,23 409:2 <b>gallons</b> 322:17 322:19 <b>general</b> 328:18 336:9 367:23 380:19 387:13 387:14,16 498:8 501:18 505:20 536:12 539:25 <b>generally</b> 313:18 425:23 456:11 504:25 505:25 554:8 <b>generating</b> 418:23 421:18 <b>generation</b> 354:17 361:1				



361:11,22	487:23	330:15 331:24	483:17,20,21	<b>ground</b> 311:3
365:21,24	<b>Glasgow</b> 541:18	357:1 363:23	484:5 485:16	315:1 316:3,15
366:17 368:1,7	<b>Glenn</b> 536:8	364:4,21	487:17,18	322:3 423:6
370:7 374:8	<b>global</b> 386:22	370:23 371:2,5	492:21,24	502:3,4 504:22
384:24 407:2,9	<b>go</b> 280:23 282:2	373:16 377:15	493:12 494:16	<b>groundwater</b>
407:21 408:4	285:14 290:5,7	377:20 378:9,9	494:17 501:3,4	322:20,23,23
420:18,18,18	299:1,6 315:3	378:20 381:11	502:20 510:14	323:4
421:11,18	319:24 326:3,6	386:12 390:24	510:15 519:18	<b>group</b> 331:21
433:14	344:13 348:17	391:7 397:8	527:20,22	353:18 354:11
<b>generator</b>	357:1 369:17	404:9 406:1,5	545:11	<b>groups</b> 548:22
407:14	381:1 388:25	411:4,5,22,23	<b>Google</b> 461:13	<b>grow</b> 314:15
<b>generic</b> 429:25	391:4 392:10	412:5,15,16,17	464:3,17	316:22 422:8
430:21 500:21	392:14 398:12	412:20 415:2	<b>Google-type</b>	422:11
<b>generous</b> 380:20	400:24 401:6	416:7,11	466:23	<b>growing</b> 316:4
<b>genesis</b> 427:24	408:19,20,21	420:23,24	<b>government</b>	323:7 330:9
<b>genetic</b> 343:8	409:25 412:4	423:2 425:11	331:2,9	331:19
<b>Gerald</b> 329:8	415:2 421:15	428:11 430:25	<b>governors</b>	<b>grown</b> 313:9
<b>Germany</b> 387:2	422:23 425:11	434:13 435:6,8	430:14	<b>growth</b> 394:6
387:9	425:11 427:17	435:15 437:23	<b>governs</b> 338:13	395:1 422:7,8
<b>getting</b> 331:3	428:15 456:5	438:1 443:8	<b>grab</b> 278:16	422:14,16,22
548:6 549:12	459:3 463:4,17	450:4 457:13	<b>grain</b> 311:7,16	425:21 439:7
<b>gigawatts</b> 421:1	465:13 470:18	460:21 472:20	326:21	<b>guess</b> 274:7
421:4,24,24	471:8 472:25	474:13,20	<b>granularity</b>	298:11 305:24
<b>give</b> 278:10	475:10,12	480:21 481:2	410:8	314:13 316:18
285:12 322:19	478:16,23	489:3,14,15	<b>graphic</b> 379:4	362:21 364:14
329:25 333:15	483:2 501:19	497:17,22	406:4	374:22 385:23
334:13 347:1	504:9,14	509:12 523:22	<b>grass</b> 328:6,7,9	390:14 395:11
357:1 365:6	508:22 513:19	527:24 538:20	330:7 331:19	397:3 406:12
378:14 381:16	530:21 531:14	546:19 555:14	<b>grass-type</b> 328:9	428:5 462:3
388:23 389:11	531:16 532:15	<b>good</b> 274:1,24	328:14	466:15 477:2
391:13,13	535:13 549:4	277:3 307:6	<b>grasses</b> 330:11	477:16 481:1
413:13 415:23	555:18	323:1 330:10	<b>grasslands</b>	482:3 488:10
418:15 424:1	<b>goes</b> 282:23	336:21 339:23	330:24	498:12 499:18
429:18 475:18	326:7 395:20	339:24 345:2	<b>graze</b> 330:25	509:3 513:4
526:15 527:3	419:22,23	345:17,18	<b>great</b> 455:13	537:19 546:3,5
<b>given</b> 306:13	434:25 453:5	352:24,25	480:9	546:24 548:23
313:6 324:13	461:7 502:15	356:18,19	<b>greater</b> 311:2	549:18 551:7
391:13,20	528:16 551:4	371:24 377:25	326:16 410:8	<b>guidance</b> 431:15
400:7 404:22	<b>going</b> 285:15	394:6 410:16	501:22	<b>guidelines</b> 331:8
432:24 433:4	290:2 298:4,8	419:7 422:17	<b>green</b> 467:4	<b>gully</b> 326:11
445:14 461:25	299:1,3,8	424:16,23	<b>grew</b> 323:9	
524:6 546:12	309:22 315:14	425:7,17	<b>gross</b> 313:19	
<b>giving</b> 434:12	316:22 323:21	441:15 454:19	520:22 521:9	
<b>glad</b> 342:4	329:9 330:14	454:20 480:10	524:19	

**H**

**H** 332:20,24  
333:7 398:10

398:14 401:2 402:3,5,6 409:25 410:3 <b>H-4</b> 410:9,22 <b>H-brace</b> 325:8 <b>habitat</b> 359:3 433:23 468:12 471:16 <b>Hackman</b> 482:24 487:22 492:16,22 493:1,2,7 494:16 507:9 509:18 556:22 <b>Hackman's</b> 493:25 <b>Hackman494</b> 558:8 <b>Hagston</b> 477:13 477:16 <b>half</b> 281:24 326:6 475:20 546:20 <b>Hall</b> 271:20 321:7 342:10 425:6 454:17 454:18 458:6 458:10,19,20 459:2 476:17 479:1 487:16 501:2 514:13 522:22 545:10 547:6,11,16,18 553:9 556:17 <b>Hall's</b> 464:22 550:13 <b>Hall425</b> 557:12 <b>Hall454</b> 556:16 <b>Hall487</b> 556:20 <b>Hall501</b> 556:23 <b>Hall545</b> 557:7 <b>HAMPTON</b> 273:6 <b>hand</b> 275:4	305:4 332:14 336:13 345:11 441:6 443:24 483:13 492:17 510:7 517:25 525:15 552:18 <b>handbook</b> 331:8 <b>handed</b> 281:17 285:16 341:4 350:21 367:11 375:9 390:1 397:1 405:19 438:20 540:13 543:5 <b>handing</b> 469:18 495:20 <b>hang</b> 490:17 <b>hanging</b> 415:18 <b>happen</b> 335:11 371:15 429:16 436:22 <b>happening</b> 331:18 436:12 443:14 <b>hard</b> 375:16 455:3 474:10 490:7 504:13 504:20 554:22 <b>HARDEN</b> 273:1 <b>Harris</b> 276:1,1 <b>Harris's</b> 289:22 <b>hay</b> 313:10 330:25 <b>HC</b> 299:9 <b>He'll</b> 443:22 <b>head</b> 456:22 <b>headers</b> 437:7 <b>heading</b> 353:10 403:19 <b>health</b> 339:2 341:20 343:4 355:16 <b>hear</b> 365:14 531:22	<b>heard</b> 401:22 402:1 513:14 <b>hearing</b> 271:6 276:16 306:21 334:21 344:19 345:9 352:16 424:11 425:4 442:13 445:23 454:12 467:19 483:3 485:23 494:3 507:3 510:3 512:1 519:6 527:14 545:4 555:19 555:22 <b>hearings</b> 467:1,8 477:4 <b>heat</b> 335:16 <b>heavier</b> 310:13 310:21,24 326:16 <b>heaviest</b> 326:22 <b>heavy</b> 490:2 <b>height</b> 315:24 377:14,19 382:19 404:22 406:6 408:2 <b>heights</b> 378:7 393:14 404:22 405:7,11,14,17 406:1 407:13 <b>held</b> 290:9 299:11 354:21 517:12 <b>Hello</b> 277:5 446:10,11 519:18 530:14 <b>help</b> 325:8 341:12 391:12 391:20 398:11 455:17 <b>helpful</b> 333:16 391:23 450:17 <b>helps</b> 310:10	392:3 443:15 471:1 <b>Heritage</b> 475:15 <b>Hernandez</b> 272:16,17,17 277:3,4 278:14 278:16,20,25 280:7,10 281:9 281:13 283:8 283:12 285:12 285:15,20,21 298:23 299:8 307:4 311:12 311:13,23 315:8,10,11 317:14,18,20 317:23 321:3,5 331:13 339:17 339:19,22 340:24 341:3 342:3,8 344:14 345:14,16 347:10,20 365:12 374:12 374:17 387:4 415:8 429:9,10 435:5 440:25 441:1 442:25 443:18 446:9 446:23,25 447:5 449:16 449:17,25 450:1 451:6,11 453:6,10 454:7 454:10 461:23 462:18,22,24 480:20 481:17 486:9,10 487:12 494:14 494:15 495:15 495:19 506:24 507:21 514:10 519:17 522:11 523:13 524:3	530:13,24 531:3 532:18 532:21 533:5 533:14,21 536:23 537:2,6 539:2,12 540:8 540:12 541:5 542:25 543:4 544:13,24 551:19 552:3,7 552:11 553:2 556:5,8,11,15 556:20,23 557:3,6,13 <b>Hernandez's</b> 323:19 330:18 <b>Hernandez345</b> 557:10 <b>hertz</b> 338:25 <b>hesitated</b> 425:9 <b>Hi</b> 335:8 <b>high</b> 323:1,1 403:10 438:9 502:16,16 530:15 <b>high-dense</b> 505:14 <b>high-voltage</b> 426:14,16 427:4,5 <b>higher</b> 313:18 313:19 383:3,9 505:18 <b>highest</b> 410:19 413:5,15 416:17,24 <b>highlight</b> 403:5 <b>highlighted</b> 472:3 <b>highly</b> 290:4 299:2,7 310:9 328:5,12 560:6 <b>Hill</b> 355:22 <b>historic</b> 393:23
---	--	---	--	--

<b>historical</b> 422:3	476:14 480:12	<b>hypothetical</b>	<b>ill-advised</b>	<b>improve</b> 352:3
<b>hit</b> 371:22	481:13 482:16	313:17 365:8,9	503:13	<b>improved</b>
<b>hold</b> 450:24	482:25 486:3,5	383:23 385:1	<b>Illinois</b> 271:13	393:11
516:16 544:3	486:7 494:8,10	417:7,9	272:5,11	<b>improving</b>
<b>holding</b> 552:21	506:20 510:11	<b>hypothetically</b>	275:10,21	393:14
<b>holds</b> 489:12	511:21 514:6,8	316:1,2	277:11 305:17	<b>in-camera</b> 290:5
554:11	514:20 517:21		324:6 333:3	290:7,9 299:11
<b>home</b> 282:6	518:5 519:1,11	<b>I</b>	444:13 520:6	556:6
452:24	519:13 523:4	<b>IARC</b> 339:3	521:2 556:3	<b>in-line</b> 489:11
<b>homes</b> 281:4	525:10 527:5	<b>IBEW</b> 276:25	<b>image</b> 467:7	489:21 490:4
337:3,14 338:7	530:9 537:3	<b>idea</b> 289:22	<b>impact</b> 284:21	491:5,7,15,15
465:8	538:20 544:18	339:17 477:12	286:1 289:13	492:8
<b>hone</b> 351:4	551:15 552:16	<b>identification</b>	289:23 312:4,7	<b>in-person</b> 536:7
<b>honest</b> 426:2	555:16	276:18 278:24	341:20 370:19	539:18
<b>honestly</b> 499:22	<b>hope</b> 315:17	281:12 283:11	433:20 440:18	<b>inadvertently</b>
509:4	443:6 547:21	341:2 350:19	468:1 473:24	275:25
<b>Honor</b> 274:10	<b>horizontal</b>	367:9,12 373:7	482:11 497:9	<b>incentive</b> 325:16
276:9,23	490:16	373:11 389:23	498:4,14 513:5	<b>incentives</b>
298:18,21,25	<b>hour</b> 419:25	396:18 406:20	513:17 520:24	320:24 517:3,4
306:16 321:16	420:2 436:11	411:15 418:4	524:9,20,24	<b>inches</b> 342:7
334:16 335:1	439:17,18,19	420:8 441:21	525:2	<b>include</b> 340:9,11
339:13,15	439:20,25,25	447:4 451:10	<b>impacted</b> 473:20	359:2 360:5
343:25 344:8	440:2 512:17	469:16 483:7	<b>impacting</b>	370:24 371:5
344:11,14	513:19,20,22	495:18 510:21	474:21 478:11	376:7 438:2
345:7 347:25	515:8,23	531:2 537:1	479:11,18	468:23 515:14
348:8 352:21	516:24 517:2	540:11 543:3	<b>impacts</b> 312:8	552:25
356:16 357:2	<b>hours</b> 435:17	<b>identified</b>	321:24 433:16	<b>included</b> 286:8
365:10 367:5	517:8	287:18 288:4	465:12 478:2,4	340:13 370:1
371:18 372:24	<b>house</b> 451:3	361:13 375:25	<b>impeach</b> 365:11	370:24 381:2
373:9,12 375:4	456:18 457:3	428:4 468:19	<b>impeached</b>	385:9 389:16
375:5 389:20	463:5 531:12	470:20,23	434:15	397:13 398:8,9
396:14,21	531:14 532:2	475:9 484:7	<b>impeachment</b>	398:10,16
397:9 406:17	553:17	493:9 526:7,22	434:19,23	399:9 400:2,16
411:12 415:4	<b>houses</b> 312:7	539:20 559:9	<b>impedance</b>	408:7 458:21
418:1 420:5	459:7,13 479:9	<b>identifies</b> 395:7	504:16	516:3 536:7
421:7 424:2,3	553:12,21	<b>identify</b> 466:20	<b>imply</b> 349:6	<b>includes</b> 385:10
429:1,3,5,7	<b>Hrdina</b> 329:8,8	469:19 481:25	414:17,24	438:13 467:2
434:14 442:8	<b>hub</b> 393:14	483:22 492:25	<b>important</b> 403:3	545:17 552:20
442:21,23	<b>human</b> 336:20	496:2,20	457:4,9 553:10	<b>including</b>
444:3 445:17	<b>hundred</b> 377:5,6	537:22	<b>impossible</b>	276:11 341:21
446:5 449:13	384:15 423:7,9	<b>IEA</b> 438:12	496:15,17	361:15 367:24
462:14 463:1	463:20	<b>iii</b> 398:21	507:22 508:1	398:2 478:5
466:8,12	<b>hundred-meter</b>	<b>iiivi</b> 398:18	<b>impression</b>	<b>income</b> 312:17
467:15 469:11	378:17 405:17	<b>iiix</b> 398:18	426:11	312:21 313:1,5

<p>313:11,19,19  <b>incompatible</b>  313:23  <b>inconsistent</b>  434:15  <b>Incorporated</b>  444:11  <b>incorporates</b>  548:10  <b>incorrect</b> 310:16  355:5  <b>incorrectly</b>  552:6  <b>increase</b> 352:8  363:2 500:6  502:14 508:3  523:11 525:2  <b>increased</b>  362:20 393:13  498:6 499:2  501:23 502:11  522:2,14 523:7  523:16,16  <b>increases</b> 311:25  497:8  <b>Increasing</b> 497:7  <b>Independent</b>  272:24 353:2  426:8  <b>independently</b>  360:20  <b>INDEX</b> 556:1  558:1 559:1  560:1  <b>Indiana</b> 272:22  448:4,8,18  452:6 465:9  468:12 473:8  475:2,17 476:1  <b>indicate</b> 281:24  357:23 362:19  441:20 545:14  <b>indicated</b> 336:23  362:6 471:14</p>	<p>473:21,23  552:24  <b>indicates</b> 277:6  378:25 380:18  387:23 393:11  393:20 403:22  418:20 467:5  471:15  <b>indicating</b>  405:12 419:21  421:10 438:8  467:3 471:13  471:20 474:12  478:25 502:15  <b>indirect</b> 458:8  <b>indirectly</b>  459:25  <b>individual</b>  430:16  <b>individuals</b>  477:4 532:8  <b>industry</b> 367:25  <b>inexpensive</b>  502:13  <b>influence</b> 287:18  288:4 530:2  <b>info--</b> 440:7  <b>information</b>  299:9 337:6  347:18 368:20  384:21 388:20  388:22 389:2  390:21 391:3  418:10 440:8  442:6 445:15  457:14 479:24  479:25 484:15  484:17 485:8  485:10 493:15  493:17 511:19  518:22,24  524:7,11,11,16  536:12 539:25  546:4,12</p>	<p>548:22 552:20  553:24 559:12  <b>informing</b>  387:24  <b>infrastructure</b>  456:1  <b>initial</b> 482:10  <b>initially</b> 427:19  428:13  <b>initiative</b> 367:22  368:3  <b>input</b> 312:25  313:4,12  477:10 523:24  <b>inputs</b> 313:1,15  401:15,19  402:4  <b>inquire</b> 335:3  339:17 532:10  <b>inquired</b> 439:3  <b>inquiry</b> 547:19  <b>insert</b> 311:6,15  333:25  <b>inside</b> 502:8  <b>inspect</b> 277:24  278:1  <b>inspections</b>  503:7  <b>install</b> 271:15  376:19 499:11  502:23  <b>installation</b>  385:11 387:11  488:15  <b>installations</b>  368:16  <b>installed</b> 386:7  386:25 387:1,8  387:15,16  393:21 405:2  407:2,5 433:21  491:14  <b>installer</b> 387:20  <b>Institute</b> 337:12</p>	<p><b>institutional</b>  427:3 428:2,3  <b>insulating</b> 502:6  <b>insulation</b> 502:1  502:10,10,19  502:23 504:13  <b>insulators</b>  490:15,17  <b>intact</b> 329:1  472:14 473:14  474:22  <b>integrated</b> 376:5  376:12 516:20  <b>intellectual</b>  481:7  <b>intended</b> 381:2  <b>intends</b> 437:15  <b>intent</b> 328:11  465:1,4  <b>interact</b> 338:9  338:14  <b>interaction</b>  476:5  <b>interactions</b>  338:16  <b>interconnect</b>  529:13  <b>interested</b>  527:24 561:15  <b>Interior</b> 451:20  <b>interplay</b> 550:14  <b>interpret</b> 362:18  <b>interpreted</b>  362:19  <b>interrupt</b> 392:4  457:18 458:14  509:24  <b>interrupted</b>  318:20  <b>intersect</b> 448:20  <b>intersected</b>  452:4  <b>intersects</b>  465:17</p>	<p><b>introduction</b>  527:9  <b>invalidated</b>  354:23  <b>Invalidating</b>  353:13  <b>investigating</b>  351:24  <b>investment</b>  360:6 512:20  <b>investors</b> 341:14  <b>invitation</b> 532:1  <b>invited</b> 451:3  <b>inviting</b> 531:11  <b>involved</b> 343:6  363:5 432:8  477:22  <b>involves</b> 281:3  433:22  <b>involving</b> 277:15  359:21 552:24  <b>Iowa</b> 271:17  324:8,8,9  329:10 407:5  436:13,14  508:13  <b>Iowa/Missouri</b>  528:4,9,25  <b>iPad</b> 326:4  <b>iPhone</b> 326:5  <b>IRP</b> 373:23  374:9 375:9  376:25 382:2  382:24 383:17  384:22 408:16  414:5,14,24  416:2,5 516:22  558:24  <b>irrelevant</b> 440:4  522:5  <b>irrigation</b>  309:17,18  310:9 313:22  321:20,24</p>
---	---	--	--	--

322:1,1,8,12 322:15,24 323:13 325:21 325:24 326:1 <b>ISO</b> 428:5 <b>ISOs</b> 426:12 <b>issue</b> 278:12 326:9 327:16 374:23 425:12 431:21 436:8 448:8 465:21 481:3 548:5 554:19 <b>issued</b> 397:18 420:12 555:2 <b>issues</b> 325:9 352:7 426:4,17 426:23 431:11 431:22 440:14 465:22,23 496:2 <b>it'd</b> 323:14 372:18 <b>it'll</b> 371:22 420:23 <b>ITC</b> 435:21 436:1,2 <b>items</b> 402:16,19 402:19 552:23	392:23 547:23 555:23 <b>jdlinton@rea...</b> 272:14 <b>Jeff</b> 275:9 353:1 487:22 <b>Jefferson</b> 271:8 272:18 273:8 273:14 <b>Jeffrey</b> 272:7,21 492:22 493:1,7 556:22 558:8 <b>Jennifer</b> 272:16 447:16 <b>jennifer@her...</b> 272:19 <b>Jim</b> 454:3 476:12 <b>JJ-02</b> 547:19 <b>Joe</b> 518:10 <b>John</b> 310:21,24 311:3 <b>JOHNSON</b> 273:6 <b>joint</b> 373:19,22 559:3 <b>Jontry</b> 454:3 476:12 525:14 525:23,25 526:4,5 527:20 552:18 555:6,7 557:5 558:20 558:21 <b>Jontry's</b> 527:9 538:21 <b>Jordan</b> 536:9 <b>Joseph</b> 518:6 557:2 558:18 <b>JOSHUA</b> 273:1 <b>joshua.harden...</b> 273:3 <b>Jrosencrants...</b> 272:10 <b>jsmall@misoe...</b>	272:23 <b>judge</b> 271:19 274:1,16,19,24 275:6 276:14 276:19,22,24 277:1,2 278:15 278:22 281:10 283:9 290:6 298:14,17,19 298:22,24 299:4 305:1,6 306:19,24 307:1,2,3 311:11,18 315:9 317:16 317:19 321:5,9 321:14 332:3,8 332:17 334:19 334:24 335:2,5 339:11,14,16 339:21 340:25 342:8,11,15,18 342:20 344:1,9 344:12,17,22 345:2,8,13 347:22 348:1,6 348:9 350:11 350:17 352:13 352:14,19 356:13 357:4 365:14,18 367:7 370:5 371:19 373:2,4 373:14,20,21 374:11,20 375:1,6 387:6 389:21 396:16 396:22 406:18 411:13 415:7 420:6 421:8 424:6,9,15,23 428:18,21,24 429:2,4,6,8 432:20,23	434:20,25 437:18 440:25 441:8,11 442:11,17,20 442:22,24 443:1,6,9,10 443:15,17,20 443:21,23 444:1 445:21 446:1,4,6,7,8 446:24 447:2 449:15,20,25 451:8 453:8 454:10,15 460:9,12 462:8 462:10,13,15 462:16,17,20 462:23,25 466:10,13,17 467:17 469:12 469:14 470:10 470:13 471:4,6 476:15 479:22 480:15,18 481:9,12,14,15 481:16,18 482:17,22 483:1,8,15 485:21 486:1,4 486:6,8 487:14 488:4 492:14 492:19 494:1,6 494:9,11,12,13 495:16 500:25 506:7,10,12,15 506:18,21,22 506:23 507:1,6 509:17,21,23 510:1,6,9 511:24 512:4 514:4,7,9,11 514:14,17 517:18,22,24 518:3 519:4,9	519:12,14,15 519:16 522:6 522:20,25 523:2 525:11 525:17,21 527:12,17,18 530:7,10,12,25 532:20 533:12 533:17,20 536:24 537:4 538:24 540:9 541:3 543:1 544:16 545:3,8 547:3 550:1,6 550:10 551:13 551:16,17,18 552:14 555:7 555:17 <b>judicial</b> 374:13 374:18 <b>July</b> 330:10 <b>jump</b> 502:2 <b>jumping</b> 502:4 <b>June</b> 439:12 529:16 534:6 534:10,23 <b>justification</b> 432:14 <b>justified</b> 380:21 431:9
<b>J</b>				<b>K</b>
<b>J</b> 271:21 444:4,8 444:15 556:14 <b>J-o-i-a</b> 305:13 <b>Jacob</b> 273:5 335:8 512:8 <b>James</b> 272:2 525:23 526:4 557:5 558:20 558:21 <b>Jameson</b> 555:13 <b>Jamie</b> 273:5 348:11 <b>January</b> 271:7				<b>K</b> 272:7 <b>Kansas</b> 273:2 325:5 <b>KB</b> 426:17 <b>keep</b> 335:22 341:9 486:11 493:10 502:3 <b>KEMA</b> 380:10 380:18,24 381:8,9 <b>Kenney</b> 271:21 285:10,14

298:1 321:12 342:15,16 428:19,20 458:7 460:12 460:13,15 462:2,5 478:20 479:25 488:4 506:10,11 514:17 522:25 523:1 550:4 556:5,16 <b>Kevin</b> 454:5 542:18,20,20 <b>key</b> 370:24 426:4 <b>killed</b> 397:11 <b>killling</b> 397:10 <b>kilowatt</b> 371:6 381:13 382:25 409:11,12 412:8 <b>kind</b> 326:8 351:25 375:21 406:3 455:24 464:3 489:4 503:16 504:5 <b>kinds</b> 506:3 516:21 <b>Kirksville</b> 271:18 423:17 423:23 <b>knew</b> 523:14 <b>know</b> 278:18 284:14 287:2 311:19 313:13 313:21 316:25 317:5 322:13 324:4 352:1 353:5 361:10 380:9 387:14 387:18,19 389:4 391:19 397:2,4 398:7 398:21 404:5	405:8 407:16 412:24 415:11 427:23 428:8 455:5,13,15 456:1,4,22 459:15 461:3,6 465:7,23 468:11 471:17 472:4,5 473:5 473:5,5,6,7,13 473:23 474:6 474:19,20 476:25 477:25 478:2,3 480:21 480:22,23 482:19 490:18 499:17,21 501:13 502:1,8 502:17 503:4,6 503:19 504:23 507:20 508:17 508:19 509:2,3 509:4 521:25 522:7,12 524:3 525:6 532:13 534:14 535:14 541:23,25 542:20,20 548:10,22 549:15,16,17 555:16 <b>knowing</b> 476:23 477:12 528:12 <b>knowledge</b> 306:14 332:1 334:14 347:18 442:6 445:14 484:17 485:10 493:17 511:18 518:24 530:21 536:19 <b>known</b> 348:20 450:6,12 452:4 452:23	<b>knows</b> 311:19 387:7 522:7 533:9 <b>Knox</b> 307:15,18 520:9,21 521:7 522:1,13 531:19,21,24 534:8 535:13 537:24 541:18 <b>Kramer</b> 426:21 <b>KV</b> 466:3,5 496:5,8,14 502:17 530:3 <b>KW</b> 371:11 376:25 377:7 379:3,15 381:15,21 382:9 384:12 384:16 385:15 386:9,10 410:20,25 413:6,11 417:7 <hr/> <b>L</b> <hr/> <b>Lab</b> 390:16,22 <b>label</b> 395:2 <b>labeled</b> 395:15 484:25 485:3 551:22 552:6 <b>Laboratory</b> 401:7 <b>lack</b> 311:9 325:11 326:9 509:9 <b>laid</b> 548:18 <b>Lamacchia</b> 517:20 518:6 518:10,11,15 519:2 523:6 525:8 557:2 558:18 <b>lance</b> 436:21 <b>land</b> 279:10,13 279:14 280:15	283:5 298:6 307:8,15,22 308:4,11,18,22 309:1,5 310:14 310:22 312:5,6 312:9,12 314:22,24 315:4 319:7 320:15 328:5 328:12 330:22 423:5,7 465:8 465:18 468:11 478:3 486:18 486:22 487:1,5 487:9 488:16 488:22,24 497:12,23 498:18,23 499:4 524:20 524:24 525:5,6 532:11 <b>land-based</b> 410:9 <b>landfill</b> 346:19 <b>landowner</b> 313:19 329:13 329:21 457:20 520:22 521:10 <b>landowners</b> 314:3 319:6 320:14 328:17 329:2,19 330:22 457:19 503:4 509:13 509:14 521:15 523:15,21,24 531:16 <b>landowners'</b> 486:14 497:18 <b>lands</b> 456:2 497:9 498:4 <b>large</b> 380:25 434:6 473:13 473:22 479:8	480:5 529:10 <b>largely</b> 431:21 <b>larger</b> 389:17 403:9 405:3,3 405:4,6,7,7,8 406:14 464:16 <b>Larry</b> 539:19 <b>late</b> 393:7 512:16 <b>law</b> 271:19 272:2,2,7,7,8 272:12,16,17 272:17,21 273:1 432:20 432:22 <b>Lawrence</b> 390:16,22 <b>lawyer</b> 480:24 <b>lawyers</b> 481:8 <b>LBNL</b> 390:24 392:22 399:25 <b>LCOE</b> 418:21 <b>leads</b> 351:25 <b>leave</b> 299:6 351:13 443:7 513:1 <b>leaving</b> 417:6 474:22 <b>led</b> 288:22 343:10 351:1 425:15,15 <b>left</b> 287:12,17 342:7 424:24 504:8 <b>left-hand</b> 287:11 364:13 <b>legal</b> 273:6 495:3 <b>length</b> 322:4 332:11 459:25 460:2 501:17 <b>lengths</b> 407:13 499:12 <b>lens</b> 426:15
--	--	--	---	---

<b>let's</b> 290:2 310:17 330:10 332:10 344:24 366:25 381:24 392:14 417:11 430:18 447:21 447:25 452:1 489:1,1 490:3 490:23 491:4 504:3	540:2 <b>line</b> 271:16 280:13,14 281:5,6,22,25 282:2,5,17 283:3,4 284:22 286:2 288:18 289:7,11,23 308:19,23 309:2,5,22 310:1,20 313:24 314:25 315:13,18,19 315:25 316:5 316:14 318:5 318:23 319:3 320:6,11 322:4 323:21 324:22 325:2,13 327:10 331:15 331:24 333:15 333:17,20,24 334:4 336:19 338:11 341:10 346:18,19,20 346:22,23 347:2,3,6 348:19 349:2,5 350:7 351:2 353:23 357:10 362:3,16 366:19 370:10 387:23 388:5 388:10 393:19 395:15 409:9 425:16,21 429:20 431:7 431:10,15 435:12 437:1,7 438:7 440:18 440:19 445:4,6 448:3 453:13 454:21 455:2,6 455:6,12 465:7	466:25 467:3,4 468:1,21 469:6 470:21 471:12 471:15 472:21 482:5 489:15 489:22,25 494:21 495:4 496:3,7,14 498:23 499:19 501:7,15 502:14 503:1,3 504:24 505:5 508:12,18 509:15 511:2,3 511:4 520:2,8 520:12,22 521:1,9 522:3 522:15 523:8,9 523:23 524:1,9 525:4 528:4,16 546:16,25 547:19 552:23 554:14,16,20 <b>linear</b> 455:25,25 550:24 <b>lines</b> 280:3,7,11 280:17,22 282:18,20,22 282:23 284:17 289:5,8 298:4 317:2 325:7 335:15,25 337:1 338:8 348:22,23 349:7 351:16 353:9 355:13 364:3 380:24 430:22 432:2 437:20 453:12 455:24,24 464:23 465:5,5 465:5,24 466:3 466:5 467:3,5 487:21 494:25	496:5,8,21 497:3,6 500:1 500:1 501:9 507:15,16 520:17 522:18 <b>LINTON</b> 272:12 <b>list</b> 287:16,22 350:3 399:16 430:5 438:10 533:15 541:12 <b>listed</b> 288:9 349:25 452:2 475:15 <b>listing</b> 400:20 <b>lists</b> 373:24 399:24 <b>literature</b> 286:8 286:14,21 <b>little</b> 285:8 317:7 317:21 322:19 324:18 375:16 376:1 390:25 391:10 403:8 452:18 470:17 474:10 514:19 532:7 <b>live</b> 280:18 281:3 282:8 298:5 <b>LLC</b> 271:24 305:15 <b>load</b> 425:21 491:23 <b>load-serving</b> 366:21 <b>local</b> 319:10,14 320:18 343:20 431:21 467:1,8 477:4 <b>locate</b> 398:13 463:25 <b>located</b> 361:23 398:17 407:10 448:19	<b>location</b> 448:5 477:9 481:25 528:24 529:7 <b>locations</b> 336:23 376:12 <b>long</b> 284:15 328:24 339:18 339:20 357:15 400:20 460:19 480:18 <b>long-eared</b> 452:13 <b>long-term</b> 357:17 <b>longer</b> 314:24 549:22 <b>look</b> 279:1 281:14 283:13 285:13 286:17 330:2,3 349:21 350:25 356:3 360:10 368:2 369:9 375:13 375:17 376:3,4 378:17,18 379:13 383:25 384:6 385:7,18 390:7 396:2 397:16 398:18 399:11,13,15 400:18 402:12 404:8 407:1 408:6 410:9,17 410:21 411:3 416:5 419:14 421:14,22 430:16 433:16 436:22 447:14 447:21 457:13 466:3 467:10 477:1 478:14 480:10 502:18 516:19,20 517:4,9 529:18
---	--	---	---	---

531:25 533:22	<b>lower</b> 313:4,5,13	514:21 518:4,5	271:15	520:4,10 523:8
534:5 535:20	364:13 384:13	518:7 519:1	<b>majority</b> 284:1	523:17 524:25
536:2 539:13	387:1,3,10,16	522:4 523:4,5	284:11 385:20	537:12 538:18
541:11	393:20,23	525:9 544:18	385:25 386:6	539:7 540:22
<b>looked</b> 410:8	398:19 436:11	545:1 547:14	<b>making</b> 360:8	543:22
438:6 466:2	515:19	551:20,25	378:20 434:1	<b>marked</b> 275:18
468:11 532:23	<b>Lowery</b> 272:2	552:4,9,12	504:3	276:17 278:23
<b>looking</b> 283:15	274:10,18,22	555:15 556:13	<b>Manage</b> 271:16	281:11 283:10
287:8 335:15	275:7 344:8,11	557:1,3,4	<b>management</b>	283:14 285:9
335:25 351:22	345:7 346:25	<b>Lowery's</b> 547:1	341:21 358:25	285:16 290:3,4
356:8 364:3	347:5,24	<b>Lowery@smit...</b>	433:1 484:4	305:23 333:8
376:18,21	356:16,17	272:5	493:5	341:1 350:18
380:13 386:2	357:2,5,7	<b>Lowery356</b>	<b>manager</b> 549:19	353:7 367:6,8
392:7 398:24	365:10,15,20	557:12	<b>manner</b> 287:4	367:12 372:25
420:17 421:5,9	367:5,10	<b>lowest</b> 384:10	548:7,21	373:6,10
426:22,25	371:18,20	411:4 413:7	<b>map</b> 375:18,19	375:13 389:20
460:5 471:11	372:24 373:3,8	<b>lunch</b> 424:16	464:4,10,17	389:22 391:25
491:3 499:25	373:12,16,22	438:7	466:24	392:14 396:17
<b>looks</b> 424:15	374:15,21	<b>lying</b> 503:12	<b>mapped</b> 479:13	397:2 406:16
458:15,17	375:5,7 379:7		<b>maps</b> 461:3	406:19 411:12
461:2 463:11	379:9 387:12	<b>M</b>	467:2,12	411:14 417:25
463:20 478:24	389:19,24	<b>M</b> 271:20	<b>March</b> 541:15	418:3,6 420:7
532:1 555:10	396:14,19,24	441:13 556:13	548:1,5	441:21 444:19
<b>lose</b> 317:7	396:25 397:8	<b>ma'am</b> 280:25	<b>Marion</b> 307:8	444:23 447:3,7
<b>losing</b> 435:13	397:15 406:21	281:18 494:20	307:11 519:19	451:9,13
<b>loss</b> 346:23	411:11,16	495:6,8,22,25	520:2,21 521:7	466:20 469:15
431:15 433:23	415:4,10,12	496:10 497:15	522:1,13	469:19 483:6
507:15	417:25 418:5	498:15,21,25	534:11 537:24	495:17,20
<b>lost</b> 312:17	420:9 421:7,12	499:6 500:7,21	539:20 540:21	510:21 531:1,5
<b>lot</b> 282:3 317:1	424:1,6,7	521:14	541:8,18	533:16 536:25
324:8 325:6	429:7 431:25	<b>Macomb</b> 324:6	<b>mark</b> 273:6	537:7 540:10
326:22,24,25	432:11 433:6	<b>Madison</b> 273:7	284:2,7 352:2	540:13 543:2,5
328:9,21 392:3	433:12 434:5	273:13	354:1 362:3	543:8 558:1
438:3 470:14	434:14,21	<b>magnetic</b> 335:18	363:1 366:18	559:2 560:2
474:21 499:23	436:24 437:12	336:4,10,15,22	373:4 431:7,10	<b>market</b> 278:7
505:16 549:17	438:17 441:11	337:3,11,13	440:9,10	312:24,25
<b>lots</b> 281:5	441:14 442:8	338:2,7,23	451:25 453:19	313:3 389:13
282:15 423:17	442:11 443:8	339:4 343:13	466:16 486:13	<b>marketplace</b>
433:21	443:12 470:12	343:23	486:16,20	289:22
<b>Louis</b> 272:9	470:13,14	<b>magnitude</b>	487:1,5,10	<b>Massachusetts</b>
<b>low</b> 338:25	480:3,12,17,24	338:21 492:6	496:3,7,13	286:9,19,22
385:22 490:5	481:6 482:25	<b>MAIDA</b> 271:21	497:16 498:3	<b>master's</b> 355:16
501:19	510:10,11,13	<b>Main</b> 273:1	498:18 499:4	355:25
<b>low-cost</b> 414:20	511:21 514:19	<b>Maintain</b>	503:1 507:23	<b>material</b> 370:19



<b>materials</b> 338:10 538:6	500:16 540:23	<b>memory</b> 474:11	407:5 508:18	<b>minimum</b> 503:2
<b>maternal</b> 452:5 452:23	<b>meant</b> 535:17	<b>Mennonite</b>	508:21	<b>Minnesota</b>
<b>math</b> 381:20 412:11	<b>measure</b> 418:22 419:5	476:22 477:24	<b>Mid-Continent</b>	501:21 505:6,9
<b>Matrix</b> 287:13	<b>measurements</b>	479:8 481:25	353:2	<b>minor</b> 510:25
<b>Matt</b> 558:9	343:12	<b>mention</b> 360:11	<b>Midcontinent</b>	<b>minus</b> 503:1 509:4
<b>matter</b> 271:13 275:24 317:6	<b>measuring</b>	360:18 475:6	272:24	<b>minute</b> 322:18
349:16 561:6	337:13 343:7	<b>mentioned</b>	<b>middle</b> 323:8	361:23 381:16
561:11	<b>mechanism</b>	318:7 353:22	474:20	382:16 464:2
<b>Matthew</b> 510:12	502:7	396:7 407:25	<b>midpoint</b> 378:25	464:16
510:18 556:25	<b>medical</b> 340:19	410:24 429:19	379:15 381:11	<b>minutes</b> 339:18
<b>Maywood</b>	342:25	456:7,16 465:4	<b>Midwest</b> 363:19	339:19
346:20 528:2,7	<b>medium</b> 489:5	470:1 473:17	363:22,24	<b>Mis--</b> 332:10
546:16	489:23	515:7	364:22,22,25	<b>mischaracteri...</b>
<b>McDonnell</b>	<b>medium/heavy</b>	<b>mentioning</b>	436:21	538:21
444:10 447:23	489:24	431:3	<b>MIKE</b> 272:2	<b>mischaracteri...</b>
528:1	<b>meet</b> 450:18	<b>mentions</b> 475:1	<b>mile</b> 281:25	499:6
<b>McDonnell's</b>	508:19 523:17	<b>mercurially</b>	460:19 475:20	<b>misinterpret</b>
476:7	<b>meeting</b> 450:24	515:19	475:20 545:14	274:12
<b>mean</b> 277:21	453:17,25	<b>messed</b> 552:1	546:12,24	<b>MISO</b> 298:17
316:24 319:16	531:15 536:7	<b>met</b> 508:24	547:5,7	306:24 339:12
325:25 364:8	536:16,20,22	<b>meter</b> 377:6	<b>miles</b> 288:17	352:20 353:3
367:18 392:4	539:18 543:20	408:13	448:19 449:1	353:12,19
395:11 406:3	544:3	<b>meters</b> 376:24	450:7,13	355:2 361:13
428:1 455:16	<b>meetings</b> 531:13	377:22 383:9	460:18,25	362:6,14,24
455:23 461:8	531:14 532:2,9	383:10,18	509:1,3	363:7,15
468:9 469:2	552:24 553:1	406:5 408:8	<b>milliGauss</b>	375:25 377:10
472:16 473:2	<b>meets</b> 430:19	<b>Michael</b> 411:20	337:4,17	377:13,16,21
477:2 478:9	<b>megawatt</b> 363:8	411:25 412:2	<b>million</b> 347:4	425:15 426:7
479:17 489:4	407:12 419:25	413:11	351:23 423:14	426:24 427:8
490:13 498:8	420:2 423:2,9	<b>Michels</b> 412:5	423:21 431:4,8	427:19,20
499:15,21	435:16 436:11	414:4,7,12,24	433:3 503:1	429:4 435:13
503:11,21	439:17,18,19	415:21 509:22	545:14 546:18	435:16,19
506:3 537:17	439:20,25,25	510:6,12,14,18	546:20,25	442:20 446:4
542:14 545:21	440:2 512:17	510:19 511:22	547:2	462:13 481:12
546:21 549:18	513:19,20,22	512:8 517:16	<b>mind</b> 324:12	486:4 494:9
549:20	515:8,22	517:18 556:25	335:23 436:10	501:21 506:19
<b>meaning</b> 280:17	516:24 517:2,8	558:9	437:17 471:22	514:5 519:12
347:4 426:12	<b>megawatts</b>	<b>Michels'</b> 415:2	<b>mine</b> 285:8,13	530:8 551:14
<b>means</b> 429:24	361:1,11 362:8	415:13,25	285:16	<b>MISO's</b> 354:16
469:3 480:23	362:12,17,20	417:6	<b>Mine's</b> 305:25	354:21,22
	363:2 407:10	<b>mid</b> 385:23	<b>minimize</b> 465:12	<b>Mississippi</b>
	423:4,23	<b>Mid-America</b>	478:1,2,4	324:7
	<b>member</b> 476:21	529:5	498:7	<b>Missouri</b> 271:2
		<b>Mid-American</b>		

271:8,17,18 272:4,9,13,15 272:18 273:2,8 273:9,14 276:25 277:16 279:17 286:25 288:18 307:8 307:12,15,18 307:22 308:1,4 308:8 322:22 323:11,25 349:17 351:9 351:11,17,24 352:4 359:21 360:6,13 361:2 361:2,5,14,18 361:19,22 362:1,2,4,9,17 362:25 363:11 366:8,15,18,20 372:4,15,21 374:9 375:18 375:19,25 376:10 378:7 382:13 407:3,4 407:11,20 408:4 419:3 423:17,24 426:18,23 431:7,11,12,20 431:23 440:12 440:15,22 446:20 447:17 450:24 452:14 453:17 467:25 472:20 475:14 476:6 495:1,10 496:5 501:12 543:21 554:23 558:24 559:17 561:5 <b>Missouri's</b> 360:4 361:6,21 366:22 373:23	375:9 376:5 382:2,24 384:22 408:12 <b>misspelled</b> 511:1 <b>misspellings</b> 510:25 <b>misspoke</b> 551:21 <b>misunderstan...</b> 274:6 <b>misunderstood</b> 437:18 <b>mitigate</b> 430:1 <b>mitigating</b> 351:1 <b>mitigation</b> 430:3 431:2 <b>mix</b> 330:2 372:4 372:4,9,15,17 382:12,12 <b>mix--</b> 330:6 <b>mixed</b> 383:14 <b>mixing</b> 438:5 <b>mixture</b> 329:12 330:6,7 <b>mode</b> 507:9 508:4 <b>model</b> 401:18,20 401:21 <b>modeling</b> 354:7 <b>modification</b> 473:6 <b>modifications</b> 526:12,25 <b>moment</b> 378:14 379:19 388:23 396:20 397:17 397:21 398:6 398:13 415:23 418:15 420:25 429:18 464:1 491:25 492:1 527:5 <b>monitoring</b> 548:25 549:6 <b>monopole</b>	288:19 289:7 289:11 311:6 311:15 316:7 316:12,21,23 321:19 <b>monopoles</b> 309:16 <b>month</b> 394:11 394:20 511:14 511:17 <b>months</b> 439:10 548:3 <b>morning</b> 274:1 274:15 277:3 307:5,6 339:23 339:24 345:2 345:17,18 352:24,25 356:18,19 555:20 <b>move</b> 276:10 317:14 330:4 334:16 344:6 352:13 365:15 406:2 424:8 443:9 445:18 453:6 454:7 467:15 485:18 493:24 499:10 527:8,8 544:14 <b>moved</b> 317:17 <b>moves</b> 335:17 <b>moving</b> 311:7,16 341:9 345:3 388:22 500:12 <b>multi-hundred</b> 433:2 <b>multiple</b> 432:13 480:4 516:21 <b>multiplier</b> 501:20 <b>municipalities</b> 366:22 <b>MVP</b> 353:13,17	353:22,25 354:2,11 361:14 362:7,9 362:15 426:25 427:20 <b>MVPs</b> 353:17 <b>Myers</b> 273:5 348:10,11 350:10,12,20 352:19 429:3 486:3 494:8 506:17,18 557:11 <b>Myotis</b> 448:18 449:1 450:3,11 452:19 <hr/> <b>N</b> <hr/> <b>N</b> 272:1 398:14 398:15,16 400:18,20 <b>name</b> 275:13 277:20 305:10 305:12 332:22 335:8 345:19 346:7 353:1 400:25 441:16 444:7 450:5 454:4 483:24 510:16,18 511:2 512:8 518:8 525:20 526:2 538:3 <b>names</b> 476:25 540:23 <b>narrow</b> 472:8 <b>NATHAN</b> 273:4 <b>national</b> 328:4 390:16,22 401:7 404:1 <b>nationwide</b> 554:15,25 <b>native</b> 328:7 <b>natural</b> 328:6	330:23 332:13 475:15 <b>Navigant</b> 400:12 400:14 <b>near</b> 271:18 337:4 474:17 474:17 475:12 <b>near-term</b> 388:2 388:11,14 <b>nearly</b> 370:18 371:25 <b>Nebraska</b> 325:5 <b>necessarily</b> 311:4 325:23 327:11 473:24 <b>necessary</b> 430:3 <b>necessitate</b> 521:10 <b>Necessity</b> 271:15 <b>need</b> 314:6 317:17 322:17 322:18 330:3 357:5,11,14,17 363:8 367:5 372:24 389:19 397:9,17 406:16 411:11 425:24 466:16 469:13 480:13 503:5,5 505:16 524:4,10,11,15 547:16 548:8 550:21 <b>needs</b> 481:2 <b>negate</b> 331:24 <b>negative</b> 433:16 <b>negatives</b> 433:17 <b>negligible</b> 351:15,16,18 525:6 <b>negotiate</b> 551:1 <b>negotiation</b> 329:17,18 529:4
---	--	--	--	--

<b>neighbors</b> 272:20 277:2 298:22 307:3 339:16 344:7 345:4 442:24 446:8 447:11 451:16 462:17 481:16 486:8 494:13 506:23 508:19 509:15 514:9 519:16 530:12 531:8 540:17 543:9 551:18 553:25 557:9 559:20	<b>nevertheless</b> 361:9 <b>new</b> 356:8 400:5 473:4,4 505:18 508:12 551:24 552:10 <b>next-to-last</b> 403:21 418:1 <b>Nicholaus</b> 368:24 <b>night</b> 342:7 532:24 <b>nine</b> 279:10,13 <b>no-wires</b> 432:9 <b>nominal</b> 500:8 <b>non-responsive</b> 365:16 <b>non-wind</b> 401:15 <b>normally</b> 353:2 <b>north</b> 349:2 355:22 362:1 366:7,15 448:13,14,24 449:2,4,5,6,7,8 452:8 469:4 482:4 508:13 528:11 546:19 <b>northeast</b> 286:25 322:22 323:11,25 351:17 352:3 362:2 426:18 426:23 431:11 431:22 436:14 440:14 452:14 472:20 495:1 495:10 <b>northeastern</b> 496:5 <b>northern</b> 283:23 452:8,13 472:6 472:17 474:13 <b>northwest</b>	361:21 407:3 407:11,20 <b>northwestern</b> 408:4 <b>NOTE</b> 290:8 299:10 <b>notice</b> 373:17 374:3,10,14,18 375:2 <b>November</b> 400:3 447:22 468:18 473:17 <b>NRCS</b> 329:23 330:12 <b>NREL</b> 401:7,10 401:13 <b>NU</b> 278:23 281:11 283:10 341:1 344:20 348:4 447:3 449:23 451:9 454:13 495:17 507:4 531:1 536:25 540:10 543:2 545:6 554:5 559:21 559:22,24 560:2,4,5,7,8 560:10,11,13 560:14,16,17 <b>NU-2-16</b> 466:21 559:15 <b>number</b> 271:14 271:24 278:19 278:22 283:14 290:3 333:15 333:17,18,22 337:7 343:20 363:8 370:4 371:7 376:4 381:25 382:6 383:21 389:20 389:21 400:6 400:11 401:23	413:12,24 416:13 423:13 425:12,13 426:19 431:4 439:21 440:2 455:13,15 460:1 466:21 467:6 473:19 475:16 476:19 497:7 498:6 500:4 504:3 515:12,12,19 515:24 517:6 529:10 533:11 533:13 535:18 551:22 553:11 <b>number's</b> 553:14 <b>numbered</b> 402:19 543:8 <b>numbering</b> 544:25 <b>numbers</b> 370:12 370:22 372:12 378:24 379:18 379:19,22 382:1,5 383:24 385:2,4,18 392:2 409:10 409:18 413:13 416:11,22 417:7,9 438:21 473:19 493:11 517:5 546:22 547:8 <b>numeral</b> 390:9 390:10,11 398:20 <b>numerals</b> 398:22 <b>numerous</b> 396:11 <hr/> <b>O</b> <hr/> <b>O'Fallon</b> 516:25	<b>oath</b> 306:7 334:10 445:11 <b>object</b> 310:13,14 326:16 374:22 538:21 <b>objection</b> 311:9 347:25 348:3 365:14,18 387:4 434:14 437:12 449:14 522:4 541:1 <b>objections</b> 276:15 306:20 334:20 344:18 347:23 352:15 374:11,20 424:10 442:12 445:22 449:21 454:11 467:18 485:22 494:2 507:2 510:2 511:25 519:5 527:13 544:17 544:19 545:4 <b>objects</b> 326:2 338:10 <b>obligation</b> 433:16 495:3 <b>observation</b> 340:14 <b>observed</b> 475:12 <b>observes</b> 380:25 <b>obsolete</b> 353:12 355:3,5 <b>obtained</b> 381:3 <b>obvious</b> 528:8 <b>occasions</b> 432:13,19 <b>occupied</b> 452:5 <b>occur</b> 327:2 351:9 364:20 364:21 453:25 471:20 528:13 550:18 551:6
--	--	--	---	--

<b>occurred</b> 525:7	286:24 287:7	462:24 463:8	<b>ones</b> 395:16	<b>opportunity</b>
<b>occurrence</b>	287:10,23	463:17,24	482:10 511:6	283:13 285:22
475:18,21	288:2,3,8,14	464:11,14,15	<b>ONM</b> 370:17	451:5
<b>occurrences</b>	289:20 306:3	464:21,21,24	419:11	<b>opposed</b> 327:3
475:16,18	311:1,24 312:3	464:25 465:14	<b>OPC</b> 519:14	<b>opposing</b> 336:2
<b>occurs</b> 346:21	313:3 314:12	466:8,22 467:9	551:16	<b>opted</b> 436:15
452:13 549:6	314:21 315:15	468:17,23	<b>open</b> 451:3	<b>optic</b> 528:17
<b>October</b> 330:11	315:16,20	471:9 472:7,15	456:18 457:2	<b>option</b> 454:22
539:17 543:16	316:6,9 317:15	472:24 473:9	459:7,7,13	<b>options</b> 360:5
<b>offer</b> 306:17	318:11,19	474:2,16,23	463:5 479:9	433:18
344:15 347:20	319:18,25	478:14 479:5	504:8 509:9	<b>orange</b> 405:2
449:17 506:24	320:3 322:15	479:20 484:19	531:12,14	<b>oranges</b> 499:16
509:24,25	323:9 324:20	488:13,21	532:2,9 553:12	<b>order</b> 274:4,14
511:22 519:2	325:20 326:14	489:4,7,10,17	553:17,21	373:19 374:1
<b>offered</b> 306:20	327:19,25	489:20 490:3	<b>opening</b> 331:13	433:12 465:11
334:20 344:17	333:2,14,21	490:10,13	<b>Operate</b> 271:15	492:6 499:9
352:15 424:10	334:5 335:22	491:14,22	<b>operating</b>	523:21 537:11
449:16,21	336:24 339:9	494:24 495:7,9	277:10 358:19	537:15,18
462:19,20	339:21 340:2	495:14 496:1	<b>operation</b> 358:7	538:16,23
467:17 494:2	340:18 341:25	496:18 498:12	<b>operations</b>	539:6 540:21
507:1 510:1	344:1 345:9	498:17 500:23	341:16 357:15	548:20 550:25
511:24 519:5	346:10 347:11	500:23 501:14	<b>Operator</b> 272:24	551:3 555:11
527:13 544:22	348:19 349:4	506:2,5 508:3	353:2 426:8	555:14,15
<b>office</b> 273:12,15	349:23 350:2,9	508:6,11,16	<b>opinion</b> 278:12	559:4 560:15
329:9,23,24	353:16 354:4	509:1 514:3	426:3 427:6	560:16
330:12	357:2 364:12	516:8 519:22	435:12,25	<b>organization</b>
<b>official</b> 331:6	373:5 377:17	520:5,7 521:6	440:16 516:16	339:2 358:10
373:17 374:3	377:24 390:25	521:12 529:2	523:6 524:23	<b>original</b> 328:25
<b>officials</b> 330:17	391:18,25	530:19,23,24	554:19	<b>oscillate</b> 338:9
521:18 524:3,5	392:4 393:25	532:4 534:5	<b>opinions</b> 324:13	338:11,12
524:12 531:14	398:14,23	535:3,17,20	325:14,16	<b>ou--</b> 431:16
532:3,14	399:1 412:18	536:5 537:2,19	387:24	<b>outage</b> 429:20
<b>offset</b> 524:24	412:19,21	539:16 540:20	<b>OPITZ</b> 273:11	<b>outcome</b> 561:15
<b>offshore</b> 364:19	415:25 417:19	541:14 542:7	277:1 298:21	<b>outer</b> 471:12
<b>Oh</b> 287:21	427:25 428:16	542:22,24	307:2 339:15	<b>outlined</b> 477:21
317:18 394:21	436:24 440:6	544:1 545:12	348:8 429:1	<b>outlook</b> 391:17
464:9 469:22	445:8 446:14	545:17 546:6	442:23 446:7	417:22 418:10
476:4 547:4	447:24 448:9	547:7 551:12	462:16 481:15	418:13 420:12
<b>okay</b> 277:23	448:21 449:10	552:9,12,22	486:7 494:12	559:13
278:14 279:1	451:19 452:17	554:7	506:22 514:8	<b>output</b> 517:14
280:9 282:14	454:7 455:21	<b>on-shore</b> 410:10	519:15 530:11	<b>outside</b> 314:17
282:20,24	457:15,16	410:12	547:3 551:17	387:1,15
283:2,16,20	458:1 459:17	<b>once</b> 430:25	<b>opportunities</b>	499:10
284:14,19	460:7,7 462:6	520:17	428:11	<b>outweigh</b> 525:4

<p><b>over--</b> 320:19 434:20</p> <p><b>overall</b> 372:21 418:22 437:15 516:9</p> <p><b>overhead</b> 455:6 501:25 504:14</p> <p><b>overrule</b> 311:18 387:6 434:25 435:2 437:23 522:6 538:24</p> <p><b>Overruled</b> 541:3</p> <p><b>oversee</b> 319:16 319:18,18 320:19 330:19</p> <p><b>overseeing</b> 330:20</p> <p><b>owned</b> 495:1</p> <p><b>owners</b> 289:18 467:1 473:4</p> <hr/> <p style="text-align: center;"><b>P</b></p> <p><b>P</b> 271:21 272:1,1</p> <p><b>P.O</b> 272:3,9 273:8,13</p> <p><b>Pacman's</b> 326:9</p> <p><b>page</b> 280:3,5,7 280:11 282:17 282:18,20,22 282:23 284:17 286:12,12,13 287:7,9,9,11 287:17 288:12 289:5,8,20 298:2 328:2 333:15,17,18 333:20,24 334:4 335:14 335:23 337:1 341:11,18 346:18,19,20 346:22,23 347:2,6 348:17 349:5 350:2</p>	<p>353:4,8 355:11 363:25 364:8 364:10,13,14 369:16 370:1,3 370:10 375:14 376:3,9 379:5 379:14 380:13 384:1,6 387:23 388:4,8 390:7 390:12 392:11 392:18,22 393:7 394:1,4 394:24,24 396:2,2 398:18 398:25 399:2,8 399:13,15 400:24 401:3,4 401:6 402:12 402:16,20 403:16,18 404:8,15 406:13,13 408:11,24 409:5,5 410:7 412:6 415:8,22 416:1 419:14 420:16 421:17 422:21 430:4 434:6,6,7 445:4,6 447:22 450:3,10,15 453:3,11 457:5 457:5 463:12 473:9 474:3 494:21 497:3,6 499:2,25 500:1 511:2,3,4 532:1 545:13</p> <p><b>pages</b> 275:18 290:9 299:11 364:10 369:4 385:10 410:1 434:7 458:23 459:1 460:16</p>	<p>499:7 552:10</p> <p><b>paid</b> 331:3 524:25</p> <p><b>Palmyra</b> 271:17 346:19</p> <p><b>Palo</b> 350:6,23 351:15 429:19 430:10</p> <p><b>panels</b> 372:5,5</p> <p><b>paper</b> 397:14 480:10,13 547:9,13</p> <p><b>paragraph</b> 365:3 390:15 393:6,10 396:3 418:19 447:25 450:16 452:3 452:12,18,19 453:11,12</p> <p><b>paralegal</b> 533:14</p> <p><b>parallel</b> 496:4,7 496:14,21 498:2 499:20 499:22 508:8 509:1,8</p> <p><b>paralleled</b> 509:12</p> <p><b>paralleling</b> 465:24 508:24</p> <p><b>parameters</b> 374:8 383:4 384:20 416:20 416:25</p> <p><b>paraphrase</b> 430:16</p> <p><b>parcel</b> 277:15 288:10 289:24 309:20,23 312:17 313:5 313:23,24 314:21,22 315:13,22 325:24 331:14 331:14,18</p>	<p>455:19 467:6 546:13,17</p> <p><b>parcels</b> 318:4,22 319:2 320:5,10 455:13,13 469:7 470:7,20 509:11,13</p> <p><b>parent</b> 277:10</p> <p><b>park</b> 491:5,19</p> <p><b>parking</b> 423:17 433:21 443:21</p> <p><b>part</b> 274:12 278:4 279:9 323:4 324:7 329:14 337:9 354:1,6,11 362:7 389:5 390:21 427:9 432:23 433:7,8 446:14,18 472:6,17 477:5 477:25 503:16 547:9</p> <p><b>participate</b> 319:7 320:15</p> <p><b>participating</b> 509:14</p> <p><b>particular</b> 337:5 364:3 365:25 369:3 370:18 380:12 397:4 399:12 408:21 425:23 427:9 430:8 457:3 463:14 531:23</p> <p><b>particularly</b> 326:15 368:19 387:25 467:24 476:5</p> <p><b>parties</b> 373:25 555:11 561:11 561:14</p> <p><b>party</b> 374:6</p> <p><b>pass</b> 452:23</p>	<p><b>passed</b> 511:13 511:16 536:13 540:1</p> <p><b>patched</b> 406:24</p> <p><b>patients</b> 340:21</p> <p><b>pay</b> 313:22</p> <p><b>PDFs</b> 480:4</p> <p><b>PE-08</b> 406:9,12 406:24</p> <p><b>PE-17</b> 349:25</p> <p><b>PE-25</b> 389:8,11</p> <p><b>PE-27</b> 369:16 370:2 388:18 391:6 392:7 417:22 418:14</p> <p><b>PE-28</b> 367:3,15 368:20 378:25 379:10 400:8</p> <p><b>PE-29</b> 380:8,13</p> <p><b>penetration</b> 403:10 404:5 437:5</p> <p><b>people</b> 299:5 317:10 323:16 326:2 406:6,7 463:21 553:12 553:17,20,22</p> <p><b>perceived</b> 525:4</p> <p><b>percent</b> 363:10 363:15 369:6 371:12 372:6,7 377:3,11,16,23 378:4,21 382:11 383:1,3 383:11,14,15 384:13,20 393:7 403:24 403:25 404:2,2 404:7,12 407:20 408:3 411:6 412:16 412:20 413:1,8 413:17 414:1 416:14,18</p>
---	---	--	--	--

417:1 422:9,12 472:22 509:14 512:17,18,18 512:24,24,24 513:2,18,21 515:21 516:1,3 516:4,5 517:6	<b>pertains</b> 521:1 <b>pertinent</b> 520:25 <b>petition</b> 349:6 <b>petitioned</b> 348:21 <b>petitions</b> 350:4 <b>Ph.D</b> 333:8 342:24 <b>phase</b> 432:18 520:16 <b>phase-out</b> 515:17 <b>phased</b> 512:16 <b>phases</b> 512:25 <b>phone</b> 534:7,12 534:25 535:4 535:10 541:16 <b>phonetic</b> 477:14 <b>photo</b> 460:17 <b>Photographs</b> 559:16 <b>photography</b> 461:15 <b>photos</b> 461:19 <b>photovoltaic</b> 401:12 <b>photovoltaics</b> 409:7 <b>phrase</b> 346:22 347:7 <b>phrased</b> 457:10 <b>pick</b> 478:10 529:7 <b>picked</b> 479:17 529:20 <b>picture</b> 331:14 461:12 <b>piece</b> 327:3 <b>pieces</b> 326:22 <b>Pike</b> 277:20 279:6,17,21 283:24 324:4 <b>pivot</b> 309:17,25 309:25 310:3,7	310:8 321:20 321:24 322:1,8 322:12,15,24 323:15 325:20 325:24 326:1 <b>pivots</b> 326:4,5 <b>place</b> 322:8,12 354:21 361:1 362:15 394:20 515:13 529:4 <b>placement</b> 288:9 309:15 313:24 321:20 <b>places</b> 298:8 309:21 457:6 475:9 505:22 <b>plan</b> 329:13,17 357:14 376:6 376:13 500:11 <b>plane</b> 309:9 <b>planned</b> 322:2 353:19 <b>planner</b> 357:12 432:1,13 <b>planning</b> 330:5 357:18,19 358:6,11 419:4 432:12 446:15 446:19 447:16 465:1,2 468:5 516:20 <b>plans</b> 327:14 329:15 <b>planted</b> 316:25 317:2 <b>planter</b> 317:3 <b>plants</b> 419:18,21 <b>platted</b> 281:7 <b>please</b> 275:3,7 285:2 290:5,7 299:6 305:4,10 311:12 332:15 332:18,22 335:14,23	336:7 344:25 345:11,19,20 346:17 347:1 348:17 351:5 353:3 355:10 364:1 365:7 367:6 372:25 389:20 392:19 402:12,18 406:16 441:5,6 441:16 443:24 444:6 466:23 467:2 469:19 483:13,22 492:25 494:22 496:2 497:4 510:7,16 518:8 522:9 525:15 526:2 539:3 544:15 <b>plus</b> 503:1 509:4 <b>point</b> 287:16,22 288:9 290:8 299:10 314:10 321:23 341:19 355:2 360:7,24 368:19 379:4 381:25 395:11 412:5 413:10 424:16 426:9 426:25 430:15 431:6 432:21 434:13 435:9 436:20 449:12 450:10 453:4 471:16 504:10 508:21,22 528:3,8,9,12 528:14,17 535:25 547:12 <b>pointed</b> 412:5 416:4 426:21 433:13 437:6 <b>points</b> 397:23,23	408:13 528:2 <b>pole</b> 316:7,14 486:16,20,23 497:10,13,20 497:22,25 498:9,14 <b>poles</b> 309:21 310:5 325:7,8 486:13 488:10 489:1,4 497:8 497:17 498:6 500:4,16 <b>poor</b> 336:3 422:16 <b>popular</b> 548:12 <b>portfolio</b> 353:18 354:2 362:9 426:25 427:10 427:20 <b>portion</b> 283:23 324:9 356:4 363:21 364:25 367:14 388:17 389:9,16 390:2 400:2 472:17 473:15 474:11 474:15 495:12 508:8 509:2,8 546:18 <b>portions</b> 376:5 397:13 <b>pos--</b> 427:18 <b>pose</b> 442:1 511:7 518:18 <b>posit</b> 366:6,9 <b>position</b> 354:15 440:8 484:2 <b>possib--</b> 427:16 <b>possibility</b> 309:17 363:16 455:2 457:21 457:25 <b>possible</b> 312:19 316:16 322:23
---	--	---	--	---

329:11 358:15 457:19 482:4 487:21 501:6,8 503:9,12,13 547:24 553:19 <b>possibly</b> 349:6 356:5 491:19 <b>potential</b> 313:11 338:16 339:5 358:25 362:12 362:19,25 363:3 365:22 365:25 397:5 403:5 408:13 <b>potentially</b> 431:12,20 432:16 433:22 465:9 <b>pounds</b> 326:20 <b>pour</b> 486:17 497:10,20 <b>pouring</b> 486:22 497:13,24 <b>power</b> 298:4 337:12 341:15 353:11,11 354:18,21 355:4 356:1 361:2 364:23 388:15 393:15 395:1 398:2 401:1 402:6 403:4,4,25 410:4 425:19 435:14,16,19 436:4,6,7,7,10 436:12,15,18 437:3,25 438:4 438:14,15 439:18,19 440:12 511:2 <b>PowerPoint</b> 368:13 <b>powers</b> 274:20	332:9 344:6 345:4,9,10,15 345:17,21,23 345:24 346:8,8 346:25 348:11 350:21 352:11 352:24 353:3 355:10 356:18 365:5,19 367:11 373:1 375:8 391:16 391:19 393:13 393:15 397:1 397:16 404:22 406:22 411:17 415:13 418:6 420:10 421:14 424:4,17 425:1 425:7 429:11 441:2 513:11 513:14 515:2 557:10 559:21 559:23 <b>Powers'</b> 511:2 <b>practical</b> 330:9 330:13 <b>practically</b> 507:13 <b>practices</b> 307:11 307:18,25 308:7,14,22 309:5 317:10 324:18 330:3 <b>prairie</b> 328:13 <b>pre-constructi...</b> 312:11,18 <b>pre-filed</b> 306:8 354:6 387:22 442:2 445:10 511:17 <b>pre-written</b> 508:7 <b>predicted</b> 420:19	<b>predicting</b> 421:23 <b>predictor</b> 336:3 <b>predictors</b> 336:22 <b>prefer</b> 523:15,15 <b>preference</b> 523:17 546:12 <b>preferred</b> 523:16 <b>prefers</b> 522:2,14 <b>premarked</b> 279:2 281:15 306:1 341:4 346:1,4 518:13 <b>preparation</b> 288:16 <b>prepare</b> 277:14 346:3 441:19 <b>prepared</b> 305:20 333:7 345:25 346:10 394:10 444:16 484:6 484:24 493:8 510:19 518:12 526:6,18 <b>preparing</b> 376:6 <b>presence</b> 280:14 283:4 <b>present</b> 404:23 432:15 552:24 553:1 <b>presentation</b> 367:14 368:14 386:21 390:21 400:2 558:23 <b>presented</b> 395:6 440:8 515:25 <b>presenting</b> 432:8 <b>Presiding</b> 271:19 <b>pressure</b> 393:12 470:15	<b>presumably</b> 422:3 <b>presume</b> 383:22 <b>Presumed</b> 353:12 <b>presumption</b> 355:3 <b>presumptively</b> 440:12 <b>pretty</b> 330:24 362:23 400:20 473:6 480:5 528:7 <b>prevent</b> 321:19 325:23 331:24 <b>previous</b> 277:13 <b>price</b> 312:24,25 313:4,14 393:11 436:22 <b>prices</b> 386:23 392:23 393:16 393:20,23,24 438:10,11 440:1 <b>pricing</b> 354:14 401:12 440:5 <b>PRIDGIN</b> 271:19 274:1 274:16,19,24 275:6 276:14 276:19,22,24 277:2 278:15 278:22 281:10 283:9 290:6 298:14,17,19 298:22,24 299:4 305:1,6 306:19,24 307:1,3 311:11 311:18 315:9 317:19 321:5,9 321:14 332:3,8 332:17 334:19 334:24 335:2,5	339:11,14,16 339:21 340:25 342:8,11,15,18 342:20 344:1,9 344:12,17,22 345:2,8,13 347:22 348:1,6 348:9 350:11 350:17 352:14 352:19 356:13 357:4 365:14 365:18 367:7 371:19 373:2 373:14,21 374:11,20 375:1,6 387:6 389:21 396:16 396:22 406:18 411:13 415:7 420:6 421:8 424:6,9,15,23 428:18,21,24 429:2,4,6,8 434:20,25 437:18 440:25 441:8,11 442:11,17,20 442:22,24 443:1,6,10,17 443:20,23 444:1 445:21 446:1,4,6,8,24 447:2 449:15 449:20,25 451:8 453:8 454:10,15 460:9,12 462:8 462:10,13,15 462:17,20,23 462:25 466:10 466:13,17 467:17 469:12 469:14 470:13 471:6 476:15
---	--	---	---	---

479:22 480:15 480:18 481:9 481:12,14,16 481:18 482:17 482:22 483:1,8 483:15 485:21 486:1,4,6,8 487:14 488:4 492:14,19 494:1,6,9,11 494:13 495:16 500:25 506:7 506:10,12,15 506:18,21,23 507:1,6 509:17 509:21 510:1,6 510:9 511:24 512:4 514:4,7 514:9,11,14,17 517:18,22,24 518:3 519:4,9 519:12,14,16 522:6,20,25 523:2 525:11 525:17,21 527:12,17 530:7,10,12,25 532:20 533:12 533:17,20 536:24 537:4 538:24 540:9 541:3 543:1 544:16 545:3,8 550:1,6 551:13 551:16,18 552:14 555:7 555:17 <b>primacy</b> 435:13 <b>primarily</b> 277:15 378:24 387:9 406:7 407:4 <b>primary</b> 282:14 387:20	<b>prime</b> 363:20,24 364:23 477:20 <b>Principal</b> 484:3 <b>principle</b> 336:9 <b>print</b> 461:24 462:1 <b>printer</b> 392:1 <b>printout</b> 341:6 364:15 560:7 <b>prior</b> 277:7 348:3 366:6 408:11 434:15 439:11 450:25 453:25 544:4 <b>probability</b> 429:20 430:7 430:18 <b>probably</b> 285:18 314:6 319:17 323:10,16 325:15 364:21 380:20 391:20 398:12 411:23 443:13 458:22 480:25 491:12 491:17 492:2 492:11 503:2 527:23 542:16 549:8 <b>problem</b> 325:19 426:13 480:15 504:12 505:2 <b>problems</b> 427:5 428:4 496:2 527:25 <b>procedure</b> 349:15,19 <b>procedures</b> 327:14,20 <b>proceed</b> 483:11 <b>proceeding</b> 353:8 547:23 548:25 <b>PROCEEDIN...</b>	271:5 <b>process</b> 298:3 330:20,21,21 455:1 456:18 465:1 468:5 477:5 478:1 <b>processes</b> 340:7 <b>produce</b> 328:14 <b>produced</b> 418:14 <b>production</b> 328:5 330:25 331:2 394:10 394:15 487:10 488:16,23,24 512:14 515:13 515:15 <b>productive</b> 312:10 <b>productivity</b> 312:13,21 313:5,14,18 323:4 <b>program</b> 318:1 318:7,10,16 319:23 320:24 328:3,4,8,19 328:20,22 329:20,22 331:13,21,22 337:8,9,10 340:12 367:23 368:8,11 436:16 <b>programs</b> 358:20 360:12 425:23 <b>progression</b> 550:24 <b>prohibit</b> 309:24 <b>prohibits</b> 309:16 <b>project</b> 284:3,7 284:16 312:4 341:15,15	352:2,3 354:1 354:8 359:14 366:7,8,13 393:12,21 396:1,6 416:6 427:7,9,18 429:19 430:8 430:19 432:5,9 432:15,16,22 433:3 440:9 451:25 453:19 464:5,9,12 486:13,17,21 487:5,10 493:5 496:14 497:17 498:3,19 499:4 501:21,21 507:23 508:9 509:8 520:4,6 520:11,16,18 525:1 532:10 536:12,14 537:13 538:18 539:8 540:1,2 540:22 541:25 543:23 545:15 549:7,19 554:12 555:1,4 <b>projected</b> 379:2 416:13,19 513:23 <b>projection</b> 382:6 382:10,25 395:1 422:19 439:1 515:9 <b>projections</b> 385:3 400:7,8 411:24 412:1 414:20,22 439:12 513:16 517:9 <b>projects</b> 328:21 353:18,25 354:11 362:7	362:15 394:16 426:7 427:10 428:10 430:9 433:11 501:19 512:15,22,24 547:20 549:14 554:16 <b>promote</b> 367:25 <b>promoting</b> 368:4 <b>pronouncing</b> 274:17 337:16 380:10 <b>proper</b> 450:5 <b>properly</b> 383:23 <b>properties</b> 278:3 278:7 284:2,4 284:8,22 286:4 479:15,16 480:11 <b>property</b> 277:24 278:1 279:21 280:13,15 281:21,24 283:3,5,23 286:2,25 287:3 287:4,19 288:5 289:17,24 309:16,21,23 321:20 324:22 325:13 455:24 465:2,5,7 466:6,24,25 467:6,7 473:4 477:9 480:2 481:8 486:14 497:18 503:3 519:19 520:23 520:25 523:22 <b>proposal</b> 427:24 <b>proposals</b> 432:10 <b>proposed</b> 284:3 315:16 354:7
--	---	--	--	--



357:10 362:3 427:19 448:3 452:2,4,12 455:12 458:15 466:24 467:3 468:1 487:1 488:14 496:13 498:18,23 520:2,12 543:15 547:20 <b>proposes</b> 308:18 308:23 318:5 318:22 319:2 320:5,10 <b>proposing</b> 508:8 <b>proposition</b> 360:4,16 387:14 394:5 <b>prospects</b> 394:6 398:3 422:16 422:22 438:1 <b>protection</b> 503:8 <b>provide</b> 280:12 281:1,2 328:1 343:18 354:10 403:5 440:20 448:4 466:23 477:7 480:14 518:22 538:2 <b>provided</b> 298:2 390:5 438:17 450:20 467:13 477:8,15 479:9 479:12 513:6 534:3 536:3,11 536:11 538:6 538:12,14 539:14,24,25 541:12 548:20 553:24 <b>providers</b> 495:2 495:10,13 <b>provides</b> 325:16 528:17	<b>providing</b> 325:5 538:15 539:5 <b>proximity</b> 284:21 286:1 289:11 528:15 529:11,25 <b>PSC</b> 351:24 360:13 431:12 <b>psychological</b> 340:7 <b>PTC</b> 516:7 <b>public</b> 271:1,14 273:7,9,12,12 273:15,15 276:25 298:20 307:1 335:9 339:14 341:20 348:6 355:16 428:25 436:13 442:22 446:6 451:3 456:18 457:5,9 459:10 462:15 467:1,8 477:4 481:14 486:6 494:11 506:21 512:9 514:7 521:18 524:3,5 530:10 531:12,14,15 532:2,2,9,13 559:17 <b>pulled</b> 421:13 422:21 427:20 490:21 <b>pulling</b> 414:5 <b>purchased</b> 529:10 549:21 <b>purpose</b> 282:14 <b>purposes</b> 336:20 353:16 377:18 412:15 <b>pursue</b> 356:10 <b>push</b> 548:2 <b>put</b> 310:1,3,4	322:2,3 328:5 331:3 368:14 380:2 386:13 397:11 398:1,3 401:12 418:10 421:21 423:23 426:18 428:13 437:25 439:23 489:14 502:3,6 513:15 517:1 517:10 544:10 <b>puts</b> 309:21 417:14 <b>putting</b> 325:23 326:25 396:11 397:5 406:6 500:11 501:15 <b>PV</b> 385:11 409:7 420:1 439:16 <hr/> <b>Q</b> <hr/> <b>qualify</b> 349:10 351:21 <b>Quality</b> 320:24 <b>quarter</b> 460:18 460:19 <b>question</b> 310:18 314:1,7,13,19 318:19 324:23 325:21 330:18 331:12,21 336:24,25 352:1 353:16 355:6 362:14 362:21 364:5,5 364:17 365:6,8 365:23 372:20 377:21 387:14 391:2 402:24 408:1 414:23 417:18 425:10 426:6 428:5 431:5,24 432:2 433:6 434:5,9	434:11,17,22 435:4,7,11 436:10 437:13 437:19,22 449:18 453:7,9 454:2,23 455:4 455:7 456:14 456:24 459:22 464:7,22 479:24 480:13 481:20 487:24 488:17 496:1 496:24 498:11 498:16 499:15 499:16,17,18 501:5 507:21 507:24 522:10 523:13 524:18 524:20,21 537:15 539:1,3 539:4 543:24 544:1 553:8,10 <b>questioned</b> 436:25 <b>questioning</b> 317:15 437:1,8 520:8 550:14 <b>questionnaire</b> 457:2,11 458:2 458:16,17 459:10 463:5 463:18 464:5 464:10,13 476:20 <b>questionnaires</b> 456:17,19 457:16 458:18 459:12 <b>questions</b> 276:6 276:21,23 277:1 298:12 298:15 306:5 306:23,25 307:2 317:24	319:21 320:23 320:25 321:3,6 321:7,10,12,18 323:18,22 324:23 326:15 327:6,23 330:16 332:2 334:9 335:10 339:10,13,15 342:9,10,13,16 342:23 343:1 343:25 347:12 348:12 352:12 352:20 356:12 365:12,19 377:18 412:16 424:4,18 425:1 425:3,6,18 428:25 429:1,3 429:5,7 438:18 440:23 442:1 442:18,21,23 442:25 443:16 445:9 446:5,7 454:8,15,18 457:4,10 459:18 460:8 460:10,15 462:11,18 463:13,22 464:22,25 467:24 468:2 470:5 476:4,11 476:14,16,17 481:10,10 482:15 484:19 485:12,18 486:3,5,7,12 487:12,15,16 488:2,7,9,13 489:2 490:24 492:13 493:19 493:24 494:8 494:10,12
--	--	--	--	--

500:24 501:1,2 506:8,16,17 509:16 511:7 514:3,6,10,11 514:13,15 517:17 518:18 519:10,13,15 519:18 522:19 522:21,22,24 524:9 525:9 526:14 527:2 530:6,9,11,14 530:19 542:17 544:14 545:8 545:10 549:25 550:3,4,8 551:15,20 556:5,16,16,17 556:20,23 557:7,12 <b>quibble</b> 395:12 <b>quick</b> 299:3 335:10 457:13 <b>quickly</b> 329:11 422:9 443:14 487:20 <b>quite</b> 324:3 343:20 387:3 443:14 <b>quote</b> 380:19 393:11 394:6 395:1 403:9,22 <b>quoted</b> 384:9	517:25 525:15 <b>raised</b> 352:7 374:1,6 465:23 <b>raising</b> 448:2 <b>ran</b> 279:21 283:22 496:7 499:22 <b>ranch</b> 326:12 488:22 <b>rancher</b> 323:20 324:11,21 <b>ranching</b> 284:4 307:11,18,25 308:7,14,22 309:4 325:1,12 487:6,9 488:16 498:24 <b>randomly</b> 337:13 <b>range</b> 379:1 384:11 385:21 385:23 448:14 448:14,25 449:2,4,5,6,8,9 501:16 517:1 <b>ranged</b> 386:8 <b>ranges</b> 379:1 452:24 <b>Rapid</b> 337:9 <b>rapidly</b> 435:13 <b>rate</b> 386:13 422:7,8 428:8 428:12 <b>ratepayers</b> 351:22 431:20 440:22 <b>re-cross</b> 298:15 <b>re-offer</b> 551:23 <b>re-route</b> 472:24 <b>reach</b> 327:17 <b>read</b> 280:21 287:17,25 289:15 335:20 336:5 341:17	365:1,2,16 375:17 393:17 393:20 401:17 402:15,18,21 406:4 417:17 434:16 435:10 448:10,21 449:11 450:21 452:25 453:16 453:21 495:5 496:9 497:14 539:3 541:19 542:9 543:24 543:25 <b>reading</b> 280:17 289:8 394:21 <b>reads</b> 288:9 289:6 341:13 450:17 452:12 532:22 536:15 540:4 <b>ready</b> 275:8 305:7 332:18 335:2 345:14 373:13,14 396:23 425:1,5 441:3,12 444:2 483:9,16 509:21 510:10 517:20 525:22 525:25 <b>real</b> 390:9 457:13 472:12 <b>really</b> 322:25 331:21 362:22 406:13 415:19 425:9 462:2 472:8 479:7 514:25 546:11 551:5 <b>reason</b> 408:2 439:8 461:8 477:2 501:23 523:20 524:2	534:16,17,18 535:2,7,12 544:9,12 <b>reasonable</b> 372:3,3 <b>reasons</b> 317:11 336:23 366:6,9 431:14 456:5 <b>Rebuttal</b> 345:25 346:16 347:13 347:16 348:14 353:4,9 355:11 360:25 366:9 367:15 369:2 383:25 387:23 394:5 401:11 406:24 429:21 432:18 438:9 513:11 559:21 <b>REC'D</b> 558:1 559:2 560:2 <b>rec--</b> 476:1 <b>recall</b> 321:18 323:22 324:23 342:25 361:19 363:10 369:23 382:20 411:9 431:3,5 432:2 434:9 435:20 437:1,7 468:2 546:21 550:16 <b>receipt</b> 306:18 334:17 <b>receive</b> 355:19 <b>received</b> 334:22 344:20 348:4 352:17 424:14 442:15 445:24 449:23 454:13 457:12 467:20 485:24 494:4 507:4 509:9 510:4 512:2 519:7 527:15	543:15 545:7 <b>receiving</b> 355:24 <b>recess</b> 345:1 424:18,22 483:4 555:20 <b>reclamation</b> 330:15 <b>reclassification</b> 349:11 351:1 351:21 <b>reclassified</b> 349:7 350:4 <b>reclassify</b> 348:21 <b>recognize</b> 279:3 281:16 341:5 367:13 399:25 406:22 411:17 415:14,17 418:9 447:7 451:13 495:21 531:5 533:22 537:8 540:14 543:6 <b>recollection</b> 546:21 <b>recommend</b> 363:16 476:1 <b>recommendati...</b> 475:22 <b>reconsider</b> 324:12 325:14 <b>record</b> 274:2 275:14 306:17 334:17 344:25 345:3,20 384:1 397:9 424:21 424:24 441:16 449:1 450:12 458:2 467:16 477:6 483:5,9 483:23 503:25 510:17 515:5 518:9 526:3 533:1,8 544:20
---	--	---	---	--

**R**

**R** 272:1 399:24  
**radiator** 335:16  
**railroad** 508:20  
**raise** 275:3  
305:3 332:14  
345:10 425:18  
425:20 441:6  
443:23 483:12  
492:17 510:7

545:1 552:1 555:18,21 <b>record's</b> 384:18 551:23 <b>records</b> 448:18 450:6 475:2,10 <b>recross</b> 428:24 462:10 481:10 506:15 <b>Recross-Exam...</b> 550:12 557:7 <b>rectangle</b> 375:21 <b>red</b> 467:2 471:15 <b>redirect</b> 298:24 299:1 321:15 321:17 342:20 342:22 365:12 429:8,10 462:25 463:2 481:18,19 488:5,6 507:6 507:8 509:25 514:18,21 523:3,5 552:15 552:17 556:6,9 556:12,17,18 556:21,24 557:1,4,8,13 <b>reduce</b> 499:11 500:8 517:5 <b>reduced</b> 327:11 452:9 458:17 463:18 469:3 499:8 561:9 <b>reducing</b> 393:15 500:22 <b>reductions</b> 393:11,21 <b>refer</b> 277:19 318:16 320:1 353:25 355:15 375:3 411:5 478:14 552:18 554:2	<b>reference</b> 346:6 349:23 351:5 353:7 400:6,11 421:22 429:12 <b>referenced</b> 401:23 457:5 485:2 505:5 <b>references</b> 399:16 <b>referred</b> 353:3 354:5 407:3 490:10 552:5 553:2,5 <b>referring</b> 333:18 452:7 524:4 <b>refers</b> 531:12 <b>reflect</b> 374:5 402:9 <b>reflected</b> 387:24 503:17 511:8 <b>reflection</b> 504:17,17 <b>reflective</b> 503:18 505:2 <b>reflects</b> 422:16 504:6 520:24 <b>regard</b> 306:4 329:15 425:19 431:4 440:9 463:25 465:1 465:21 467:24 476:5 543:12 553:6 554:11 555:3 <b>regarding</b> 314:7 429:22 467:25 <b>regional</b> 358:10 401:18 430:12 431:13 <b>regulating</b> 349:17 <b>regulation</b> 425:21 426:19 426:22	<b>REGULATO...</b> 271:19 <b>rehabilitate</b> 435:2 <b>reimbursement</b> 314:3,8 <b>relate</b> 340:7 <b>related</b> 358:6 363:1,2 499:14 538:7 561:10 <b>relates</b> 367:1 <b>relating</b> 359:3 387:25 <b>relation</b> 281:21 336:1 <b>relationship</b> 340:16 <b>relationships</b> 446:19 <b>relative</b> 369:9 501:14 561:12 <b>relatively</b> 436:4 502:12 <b>relevance</b> 374:22 <b>relevant</b> 374:22 <b>reliability</b> 349:13,14 352:3,6,9 430:22 431:10 431:11,13,22 431:22 440:14 <b>reliable</b> 403:6 <b>relied</b> 360:16 389:1 390:15 397:22 <b>Relief</b> 271:14 <b>relies</b> 390:21 <b>rely</b> 378:23,24 401:10,11 407:22 534:15 <b>remain</b> 473:14 <b>remainder</b> 472:18	<b>remaining</b> 313:4 <b>remains</b> 472:14 <b>remember</b> 400:9 400:16 413:17 429:11,13 433:5 438:19 464:25 476:19 488:11,16 507:24 516:12 524:21 535:24 551:22 553:13 <b>remind</b> 278:20 <b>remote</b> 528:21 <b>removed</b> 327:12 <b>removing</b> 327:14 <b>renewable</b> 354:17 361:6 401:7 420:17 421:18 435:14 435:18 440:13 <b>renter</b> 313:20 <b>repeat</b> 318:19 354:25 365:23 398:20 402:17 403:17 414:11 423:13 435:3 522:9 538:25 <b>repeater</b> 528:19 <b>rephrase</b> 314:19 377:21 496:24 <b>report</b> 278:11 350:22 369:20 369:24 370:2 376:6 380:9,18 382:1 385:9,10 389:9,13,17,17 390:1,3,8,16 392:15,18 394:1,25 395:5 395:9,10 397:4 397:12,13,18 397:22,23,24 398:2,3,8,9,11	398:19 399:9 399:12 400:15 400:21 401:15 401:16 402:4 402:10 403:9 403:12,16,22 403:23,23 405:19,20 406:1,6 407:24 408:6,21 409:22 410:20 411:25 412:6 413:6,8,22,25 414:6 416:18 416:24 417:15 417:19,20 422:21 559:6,7 <b>reported</b> 271:23 368:15 379:1 385:15 386:7 393:21 413:7 <b>reporter</b> 279:2 281:15 525:19 539:3,4 561:2 <b>REPORTER'S</b> 290:8 299:10 <b>reporting</b> 271:24 368:18 368:20 392:22 404:21 419:17 <b>reports</b> 353:21 358:21 393:7 396:11 397:5 401:24 402:8 405:24 417:14 <b>represent</b> 353:1 414:17 <b>representative</b> 319:13 401:6 451:4 459:5,6 460:6 477:11 <b>representatives</b> 319:11,12,14 320:19 466:25
---	--	--	---	--

531:11	329:20	533:2 534:2,3	<b>right</b> 274:1,18	402:25 404:13
<b>represents</b>	<b>residences</b>	536:3,6 539:14	274:19,24	405:8,14,17,22
362:22 471:13	289:12,14	539:24 540:6	275:2,4 283:15	405:23 407:16
477:16,17	456:3 477:20	540:16 541:12	286:17 287:22	408:4,7,13
<b>request</b> 277:16	478:2	544:1,22	289:8 290:6	409:7,13,19
281:20 402:17	<b>resident</b> 521:25	550:13 560:9	298:14,19	410:10,21
447:10 451:15	522:13	560:10,12,13	305:3,4,9	411:6 412:9,10
466:21 468:15	<b>residential</b> 282:8	<b>responses</b>	317:2,12 318:2	412:13,23
531:8,25	282:13 286:2,4	457:12 459:8	327:5,23 330:9	413:2 415:6
532:24 533:7	387:11 477:20	463:3,9,20	331:15,17,20	416:3,20,21
536:6,14,19,21	<b>residentially</b>	476:20,21	332:2,14	417:5 420:2
537:21 538:1,9	282:9	<b>responsibility</b>	333:19,23	421:1 422:5,9
538:19 539:8	<b>residents</b> 521:12	476:7,8,9	334:13 339:11	422:12,15,24
539:11,15,25	<b>resolution</b>	<b>responsible</b>	343:24 345:11	423:6,15 424:9
540:2,17 541:9	547:23	358:1,4	346:17 347:22	424:15,20,23
541:13 543:8	<b>resolutions</b>	<b>rest</b> 274:23	348:1 352:11	425:4 427:11
543:19 544:11	536:13 540:1	471:21 472:14	356:11 358:2	431:6 433:5
551:21 559:15	<b>resolve</b> 326:10	474:22	358:16,20	436:19 439:2,5
560:3,9,10,12	426:23 440:14	<b>restricted</b>	359:22 360:8	441:6 443:17
560:13,18	<b>resolving</b> 374:2	282:12,12	361:3,7,11,24	443:20,22,24
<b>requested</b>	<b>resource</b> 329:7	548:16	362:4 363:13	449:20 452:19
279:16 540:17	376:5,13 378:5	<b>result</b> 327:11	364:11 366:9	455:17,21
543:20	419:4 456:3	343:8 356:6	366:23 368:16	460:7,24 464:5
<b>requesting</b>	465:10 473:4	371:13 426:15	368:21,24	464:9,12
431:12	516:11,20	496:3 511:13	369:6,18,24,25	465:25 468:13
<b>requests</b> 429:23	<b>resources</b> 370:6	523:7 524:25	370:2,7,13,25	469:10 470:4,7
453:17	516:22	<b>resume</b> 424:16	371:13 372:7,9	470:15 471:17
<b>require</b> 431:2	<b>respect</b> 374:6	<b>return</b> 312:12	376:22,25	474:5,12,20
500:10 513:12	<b>responded</b>	328:25 329:12	377:3,8 379:3	476:3,13 482:2
524:7	553:23	428:9,12	379:20 380:10	482:14,17
<b>required</b> 322:16	<b>responding</b>	474:23	380:16 381:7	483:3,12,13
496:7,19,21	463:24 533:6	<b>returned</b> 312:10	382:7 383:6,12	485:21 487:14
498:7 532:8	<b>responds</b> 531:25	330:23 457:17	383:24 384:4	487:19,23,25
552:20 554:18	<b>response</b> 312:23	<b>review</b> 285:22	384:16,25	488:5 490:5,6
<b>requirements</b>	358:15 360:5	286:8,14,21	385:22 386:10	491:2 492:17
328:18 554:11	360:12,17,18	319:1 320:9	386:15,16	495:3 496:11
554:24	425:23 431:5	330:2 353:23	388:3,12,15	500:18,25
<b>research</b> 278:3	434:12,12,19	361:15 362:7	389:5,14,17	502:25 505:8
278:11 312:1	435:7 447:10	415:1,23	391:12,14	508:1,14,15
318:1,6,7,9	451:15 461:24	459:18 475:15	392:7,11 393:1	510:7 515:3,4
337:8,12 343:5	464:1 468:15	<b>reviewed</b> 279:10	393:2,17 394:2	516:1 517:25
343:6,10,13,23	495:23 496:12	327:20 328:16	395:3,17,20,23	522:20 525:11
<b>reserve</b> 318:7,10	496:18 531:7	415:15,17	396:9,13	525:15 527:12
318:16 328:3	532:23,24	467:8	398:15 399:17	529:23 531:19

531:22 532:12 537:16 545:4 547:5,15,16 549:8,24 552:7 552:12,14,21 553:18 555:7 555:17,19 <b>right-of-way</b> 283:22 314:15 314:17,18 315:3,4,18 430:23 495:11 495:12 496:4 499:8,10 500:8 500:19,22 546:17 548:6 549:11,21 551:1,2,6,9,10 <b>right-of-ways</b> 500:20 <b>rights</b> 495:4 503:3 <b>Riser</b> 399:24,25 401:8 <b>Riser's</b> 400:25 <b>risk</b> 341:21 <b>risks</b> 351:14 <b>River</b> 324:7 <b>Rivers</b> 520:6 <b>road</b> 277:20 279:6,17,21,22 283:24 428:15 <b>Robert</b> 441:13 441:17 556:13 558:17 <b>Rockefeller</b> 343:10 <b>role</b> 403:3 437:2 <b>Romaine</b> 272:13 <b>Roman</b> 390:8,10 390:11 398:20 398:22 <b>Ron</b> 401:13 <b>RONALD</b>	271:19 <b>roof</b> 423:17 433:21 <b>room</b> 290:7 353:8 425:11 <b>Root</b> 305:15 <b>rooting</b> 327:17 <b>Rosencrants</b> 272:7 275:9,9 275:12 276:9 276:15 280:5 285:18 298:25 536:10 539:19 556:4,6 <b>rotor</b> 393:13 407:13 <b>roughly</b> 375:24 386:8 404:6 515:22 <b>round</b> 326:2 378:20 381:11 464:11,13 <b>rounded</b> 378:11 414:14 <b>rounds</b> 459:7,13 <b>route</b> 321:23 322:5,6,14 331:16 445:4,5 448:19 451:1 452:9,10 458:16,17 459:19,20 463:18 464:4 464:17,19 465:12,15,15 465:17,19 468:24 469:3,8 469:24 470:2 471:15 472:25 473:18,25 475:10,12,23 475:24 476:1 478:10 479:6 479:10,10,17	482:10 528:12 543:15 544:4 <b>routed</b> 322:3 528:18 <b>routes</b> 452:8,23 453:5 469:5 479:16 482:4 <b>routing</b> 284:6 457:4 465:3 468:5 528:2,13 <b>row</b> 316:11,14 328:13 330:22 <b>rows</b> 316:12 <b>rubber</b> 502:8,9 <b>ruin</b> 323:4 <b>rule</b> 501:18 <b>ruling</b> 547:25 549:12,13,20 <b>run</b> 323:15 326:23 362:4 383:21 465:8 548:5 <b>run-away</b> 507:20 <b>running</b> 281:5 349:5 465:7 472:21 496:3 496:13 499:19 <b>rural</b> 289:12,14	<b>satisfy</b> 554:24 <b>save</b> 317:20 397:14 480:10 <b>saw</b> 274:5 325:17 <b>saying</b> 355:2 427:14 471:17 472:2 498:13 533:4 550:24 551:24 <b>says</b> 335:16 341:24 385:24 386:11 393:18 395:6 403:9,12 403:13 406:6 440:10 445:4 450:9 452:16 477:16 537:18 <b>scale</b> 379:13 380:21 381:7 384:10 385:10 386:1,8 387:10 387:15,16,21 409:7 464:1,3 <b>scan</b> 410:18 <b>scenario</b> 381:7 508:3 <b>scenarios</b> 403:25 <b>schedule</b> 284:25 287:7 367:15 388:18 390:20 400:16 406:9 458:3,5,11 459:1 463:4 464:6 478:17 479:4 481:21 485:3 547:19 547:20,25 548:3,4,10,18 549:1,5 550:17 <b>scheduled</b> 525:13 555:10 <b>schedules</b> 275:18 276:11	359:2 367:1,2 376:7 388:18 391:22 392:2 479:14 481:21 484:9 <b>Schuyler</b> 308:4 308:7 520:9,21 521:8 522:1,14 535:3,4,6 537:23 541:17 <b>Schwartz</b> 477:14 <b>science</b> 324:16 <b>Sciences</b> 355:17 <b>scouted</b> 317:1 <b>screen</b> 467:7 470:25 <b>season</b> 323:7 330:9 <b>seasons</b> 548:19 <b>seat</b> 275:7 332:18 441:9 525:18 <b>second</b> 283:2,17 283:20 288:9 338:9,13 341:18 364:7 389:11 392:11 393:6 398:25 399:20 403:15 403:18 415:10 420:16 424:1 430:4 443:22 547:19 <b>second-to-last</b> 450:16 474:9 <b>section</b> 286:14 341:12 353:10 353:10 354:5 403:14 408:23 448:14 449:5,8 449:9 454:22 461:17 473:14 475:19 479:8 508:12,23
---	---	--	---	---

**S**

**S** 272:1  
**safe** 459:19  
492:11  
**safely** 342:4  
**safety** 338:18  
**sake** 315:12  
**sale** 529:24  
**sales** 278:6  
279:11,13  
**saline** 323:1,2,2  
**salinity** 323:3  
**sample** 458:1  
477:11

509:12	505:13,20	<b>sentences</b>	534:24 536:8	<b>sight</b> 341:10
<b>sections</b> 448:15	517:10	287:16	537:11,24	<b>sighting</b> 475:13
448:25 449:3,4	<b>seed</b> 329:12	<b>separate</b> 545:19	538:17 539:7	<b>sign</b> 346:23,24
449:7 460:18	330:2,10	545:22	539:11 541:7	347:3,4 532:9
470:23,24	<b>seeding</b> 330:6,6	<b>separately</b>	<b>shield</b> 528:18	532:14
471:13 472:3	330:13	458:22 545:22	<b>shielding</b> 496:6	<b>sign-in</b> 532:8,14
473:11 475:16	<b>seeds</b> 330:7	<b>September</b>	496:20	532:17
500:17 503:9	<b>seeing</b> 287:20	439:13 536:6	<b>shifting</b> 341:9	<b>significance</b>
<b>sector</b> 403:4	473:18	<b>served</b> 432:16	<b>short</b> 430:23	280:14 283:4
<b>secured</b> 525:5	<b>seek</b> 314:3	<b>service</b> 271:1	504:25	<b>significant</b>
<b>see</b> 276:24 282:5	<b>seen</b> 317:1 341:8	273:7,9 335:9	<b>shorten</b> 277:19	289:13 357:9
285:16 290:2	397:3 398:7	419:18,22,23	390:25 500:13	363:21 364:18
310:17 314:11	401:23 405:13	419:24 446:21	500:15	364:19,25
325:18 329:21	501:19,20	450:19,25	<b>shot</b> 461:6	504:15
329:24 330:1	<b>segment</b> 286:10	451:21 453:16	<b>shoulder</b> 415:19	<b>signing</b> 542:9,11
330:13 332:12	448:20	475:25 512:9	<b>show</b> 285:8,15	<b>silver-haired</b>
353:14 354:4	<b>segments</b> 451:25	520:19 543:13	344:23 348:2	450:5,12
364:13,15	461:1	543:16,20	363:8 422:7	<b>similar</b> 278:3
375:18,19,22	<b>segregated</b>	551:5 559:17	462:20 463:19	330:7 351:12
376:9,13,15	520:14	<b>services</b> 277:7,9	466:25 513:16	368:3 491:17
380:22 381:4	<b>select</b> 479:10	277:14 279:6	533:4	491:18 513:10
384:7 385:22	<b>selected</b> 337:14	341:22 484:1	<b>showed</b> 331:14	515:2
386:3 390:14	453:20 465:19	493:4	<b>showing</b> 344:23	<b>simple</b> 336:21
390:18 391:9	469:23 479:6	<b>Services'</b> 288:22	405:2,4,8	362:14 371:21
396:2 398:6	482:11 543:24	<b>session</b> 290:9	408:8 415:13	378:20 408:1
399:1,19,24	<b>selecting</b> 451:1	299:11	420:25 466:15	503:20 505:3
400:5,11,24	<b>selection</b> 453:25	<b>set</b> 319:21	466:19	513:9
401:6 403:14	455:1 530:1	320:22 328:4	<b>shown</b> 312:1	<b>simplify</b> 520:8
403:19,21	544:4	331:4 476:3	440:19 475:6	<b>simply</b> 352:1
404:3,18,19	<b>semester</b> 505:4	481:22 526:14	<b>shows</b> 281:21	395:5 414:12
405:16 406:4	<b>sending</b> 503:21	<b>setting</b> 328:6	355:16 392:25	431:12 549:10
407:2 409:6,9	<b>senior</b> 271:19	376:10 477:22	412:10 420:3	<b>simultaneous</b>
409:10,18	273:5,11 493:5	<b>seven</b> 430:5,9	439:16 461:6	346:23
410:3,5,9	<b>sense</b> 412:21	<b>share</b> 351:23	463:13 469:22	<b>single</b> 372:17,21
412:6,7 418:19	425:17 457:7,8	415:5 431:6	479:14	<b>single-axis</b> 372:7
420:10,16,20	508:25 535:23	<b>sharing</b> 415:9	<b>shunt</b> 504:21	372:18
421:20 430:9	<b>sentence</b> 287:25	<b>sheath</b> 502:9,9	<b>Shut</b> 366:8	<b>single-family</b>
435:18 447:21	335:16,22	<b>shed</b> 507:20	<b>sic</b> 399:24,25	282:13
447:25 450:15	336:3 341:13	<b>sheet</b> 532:8,14	438:12	<b>sir</b> 305:6,7
452:1 458:23	393:10 402:15	532:17	<b>sick</b> 533:15	332:15,19,23
461:1 464:15	402:19,22,24	<b>Shelby</b> 307:22	<b>side</b> 287:11	342:17 345:13
471:18,25	403:21 452:12	307:25 520:9	315:18 471:23	396:16,23
474:10 479:7	452:18 453:13	520:21 521:8	<b>sided</b> 432:20	425:5,8 428:23
490:17 504:25	543:25	522:1,13	<b>Sierra</b> 359:20,25	441:8 443:3

444:1,2 483:15 483:16 492:17 492:19 501:8 505:13 508:5 518:1,3 525:12 525:17 550:5 <b>sit</b> 281:4 477:7 509:7 <b>site</b> 372:18,21 455:1 473:9 477:23 529:9 529:14,20 <b>sites</b> 456:4 465:10 473:4 <b>situation</b> 429:17 431:16 <b>six</b> 280:24 326:19,21 423:9 448:19 501:19,20 502:24 <b>sixth</b> 430:9 <b>Sixty-four</b> 373:18,22 <b>Sixty-one</b> 352:14 <b>Sixty-three</b> 373:3 <b>size</b> 423:8 448:13 503:15 504:5 529:23 <b>sizes</b> 405:12 <b>slash</b> 496:6 <b>slide</b> 368:19 379:6,11 385:11 386:1 386:17,21,22 400:8 <b>sliding</b> 486:11 <b>small</b> 272:21 276:22,23 298:18 306:25 339:13 352:21 352:23 353:1	356:13,14 429:5 442:21 446:5 462:14 464:15,17 474:15 481:13 486:5 494:10 503:9 506:20 508:8 514:6 519:13 530:9 551:15 557:11 <b>smaller</b> 316:11 <b>Smith</b> 272:3 363:4 377:16 377:23 555:13 555:13,14 <b>snow</b> 342:5,7 351:15 <b>social</b> 341:20 <b>sodalis</b> 448:18 449:1 450:4,11 452:19 <b>sodium</b> 323:2 <b>soil</b> 310:15 324:16 327:1 327:13,15 328:11 492:4 <b>soils</b> 323:2,3 331:5 <b>solar</b> 353:11 354:13,18 367:2,25 368:1 368:15 369:2 369:10 370:10 370:17,18 372:3,21 374:24 378:24 379:2 381:7,14 381:24 382:7 382:10,11,13 382:25 383:2,8 383:13,15,18 384:10,19,21 384:22 385:2 385:10 387:8	387:21,25 388:2,11 394:13 407:23 409:3,22 411:24 412:7 412:17 413:25 415:22 416:12 416:19 417:1,2 419:23 420:1 420:22,25 421:24 422:5,8 423:2,3,9,18 423:23 425:20 433:14,19,20 435:14,22,25 436:5,7,10,14 436:15,18,22 436:23 438:4,8 438:9,15 439:16,19,25 440:1 511:12 512:12,21 513:18,25 515:24 516:1,6 516:10,11,18 516:23,24 517:7,12,15 <b>sole</b> 355:1 391:3 <b>solution</b> 426:13 427:1,20 <b>solutions</b> 427:3 <b>solve</b> 426:17 <b>solving</b> 427:4 <b>somewhat</b> 315:17 316:13 406:13 426:9 436:17 <b>soon</b> 330:8,12 <b>sophisticated</b> 371:25 <b>sorry</b> 287:8,21 299:4,9 315:7 317:18 318:12 319:23 334:5	339:3 341:9 377:20 396:22 427:17 446:13 446:25 453:15 455:9 457:18 458:14,20 459:4 461:24 464:7,8 466:16 470:10,24 471:24 482:18 491:15 505:3,4 509:23 527:6 531:20 533:3 533:13 538:13 546:24 <b>sort</b> 403:8 411:5 434:23 <b>sorts</b> 503:8 <b>sought</b> 279:20 467:4 535:23 <b>sound</b> 369:24,25 386:14,16 404:13 <b>sounds</b> 383:6,12 383:24 384:25 416:21 <b>source</b> 322:16 336:10,16,25 337:5,6 338:4 338:11 368:1 369:15,19 378:23 391:3 392:9 395:8 <b>sources</b> 322:20 322:21 323:11 323:13 335:19 338:3,6 368:6 390:15 400:14 <b>south</b> 469:4 472:4 <b>southeast</b> 324:9 <b>southern</b> 356:4 452:8 473:15 474:13	<b>soybeans</b> 313:9 <b>space</b> 423:16 <b>span</b> 499:11 549:6 <b>spans</b> 500:13,15 <b>speak</b> 289:17 319:6,10 320:14,18 323:12 420:23 495:9,13 500:4 505:25 521:12 521:15,18,21 523:21 <b>speaking</b> 407:17 450:7 500:5 <b>speaks</b> 437:17 <b>special</b> 358:22 <b>specialized</b> 343:3 358:18 <b>species</b> 359:14 448:4 450:6 452:1,2 475:3 475:7,23 476:2 548:13 <b>specific</b> 319:1 320:9 336:22 340:7 358:5 460:1 475:23 477:22 520:4 554:19 <b>specifically</b> 408:22 447:11 537:12 538:17 539:7 <b>specified</b> 508:21 <b>specify</b> 453:5 <b>spectrum</b> 489:18 490:3,5 491:3 491:11 <b>speculating</b> 437:16 <b>speculation</b> 387:5 437:14 522:5
--	--	--	---	---

<p><b>speeds</b> 408:8  <b>spell</b> 305:12  <b>spellings</b> 477:14  <b>spend</b> 383:21  <b>spending</b> 351:23  <b>spoke</b> 319:12              514:23  <b>spoken</b> 319:13  <b>sponsored</b> 554:5  <b>sponsors</b> 368:13  <b>spray</b> 315:25  <b>spraying</b> 315:21  <b>Spring</b> 272:13  <b>square</b> 315:13              336:7 423:11              423:14,21  <b>SR-3</b> 481:21  <b>St</b> 272:9 288:18  <b>stabilize</b> 331:5  <b>Staff</b> 273:4,5,5,6              273:9 298:15              306:22 334:25              335:9 348:9,12              350:18 352:17              360:13 429:2              429:11 442:17              442:18 443:16              462:11 481:10              486:2 494:7              495:24 496:1              506:16 512:5,9              514:22 516:8              519:9,10              527:17 550:9              559:17,18  <b>stage</b> 341:16  <b>stand</b> 275:1              305:2 314:20              332:11 345:9              345:10 363:5              377:17 424:17              424:18 471:2,8              483:3 555:20  <b>standard</b> 357:18</p>	<p>    361:7  <b>standards</b>              338:23  <b>standing</b> 347:24  <b>start</b> 371:24              398:13  <b>start--</b> 449:12  <b>started</b> 281:1              287:23 394:16              459:18  <b>starting</b> 287:15              348:19 349:4              402:24 415:22  <b>starts</b> 336:25              502:18  <b>state</b> 271:2              275:13 305:10              319:13 323:5              329:4,6,7,9              330:12 332:22              337:2 343:20              345:19 346:17              397:8 435:12              436:15 441:15              444:6 448:2,17              452:3 469:5              482:5 494:24              496:12 497:7              501:12 510:16              518:8 526:2              554:18 555:3              561:5  <b>stated</b> 533:6              535:21 542:19              544:2  <b>statement</b>              309:24 331:13              337:15 362:13              391:3 419:1              434:16 449:11              544:10  <b>statements</b>              336:8  <b>states</b> 279:10</p>	<p>288:16 312:3          317:25 319:22          320:23 325:4          328:23,24          337:4,14          348:25 349:1          353:10 364:21          398:3 405:19          405:21 446:21          448:10 451:20          452:22 496:18          534:1 536:6          539:17,25          541:15 542:8          543:19 544:6  <b>static</b> 338:12,24              339:4 436:4              517:13  <b>stating</b> 538:15              539:5  <b>station</b> 528:20              529:25  <b>stations</b> 477:7              531:17  <b>status</b> 343:22              351:12 554:10  <b>stay</b> 414:21  <b>stays</b> 329:1  <b>steady</b> 436:5  <b>steel</b> 491:4,6,9              491:10  <b>step</b> 332:4              427:13 428:14              441:2,5 443:3              492:15 509:18              517:19 525:12              555:8  <b>STEPHEN</b>              271:20  <b>stepping</b> 471:23              513:21  <b>steps</b> 341:15              512:16,23  <b>Stewardship</b></p>	<p>319:23  <b>Stifel</b> 368:23  <b>Stoll</b> 271:20              321:9,10              342:12,13              428:21,22              460:10 479:22              479:23 480:9              481:4 488:2              506:7,8 514:14              514:15 522:24              533:10 550:2,3  <b>stop</b> 504:7  <b>stopped</b> 278:21              426:25 549:9  <b>straight</b> 315:17              489:15 502:14  <b>strawberries</b>              313:10  <b>stream</b> 323:6  <b>streams</b> 359:4  <b>street</b> 273:1,7,13              443:22  <b>strictly</b> 505:21  <b>strike</b> 365:15              453:6  <b>strikes</b> 351:6,9              351:12  <b>strip</b> 288:10  <b>strong</b> 436:14              546:11  <b>structure</b> 340:6              489:10,11,12              489:13,18,20              489:22,25              490:2,15,16,17              490:19,21              491:7,13,21,24              491:25 492:2              503:7 504:11              507:19,20  <b>structures</b>              488:15 491:4              492:10 499:11</p>	<p>500:10,16  <b>stubs</b> 504:25  <b>studied</b> 286:1              423:16  <b>studies</b> 286:8,21              287:17,24              288:3 336:19              337:10,19              343:11 354:7,9              433:6 548:7,11              548:13,15,21              550:16,23              551:2,7,8  <b>study</b> 284:21              286:24 287:3              336:1 337:12              340:5,6 358:25              403:14,19,19              411:19 464:18              464:19 559:10  <b>subdivision</b>              280:18 281:3,3              281:7,22 282:9              282:12 298:5  <b>subject</b> 283:23              348:2 361:6              432:5 448:20              450:20 466:24              493:12,25  <b>subjects</b> 548:12  <b>submission</b>              526:19  <b>submitted</b> 427:8              456:17,19              457:2 495:24              547:9  <b>submitting</b>              457:20  <b>substance</b>              536:11 538:4              539:23 542:8  <b>substantial</b>              503:6 551:2,7  <b>substantially</b></p>
---	--	---	---	--



431:9 436:11 497:8 500:5 <b>substation</b> 271:17 460:21 508:13 528:3 528:16,19 529:8,9,11,12 529:23 <b>substations</b> 528:21 <b>subtract</b> 513:21 515:15,18 <b>success</b> 330:15 <b>successful</b> 350:3 <b>sufficient</b> 440:20 <b>suggest</b> 425:22 437:16,16 <b>suitable</b> 529:22 <b>suite</b> 428:11 <b>summarize</b> 354:15 <b>summarized</b> 343:15 403:3 463:19 <b>summary</b> 350:22 398:19 402:13 403:14 403:19,19 404:9,16 418:22 463:8 559:19 <b>summer</b> 323:8 <b>summers</b> 325:4 <b>Sun</b> 272:18 <b>Sunshot</b> 367:21 381:25 385:9 390:20 400:1 <b>supervise</b> 454:4 544:7,8 <b>supplement</b> 451:16 560:10 <b>supply</b> 323:14 <b>supplying</b> 361:2 403:25	<b>suppose</b> 397:10 423:4 <b>sure</b> 280:16,16 280:23 285:12 286:10 289:8 340:4 355:1 362:22,23 371:25 378:15 381:19 386:4 388:24,24 391:8,16 404:19 415:15 415:24 423:20 435:6 437:13 438:12 443:12 461:22 462:19 471:6 487:19 499:9 506:6 515:5,6 516:19 522:12 544:19 547:15 552:21 <b>surface</b> 322:21 327:1 <b>surnames</b> 479:12 <b>surprise</b> 428:10 <b>Surrebuttal</b> 275:17,23 276:3,10 279:25 280:12 282:18 283:18 283:21 284:18 285:5 288:13 289:20 305:20 305:23 306:4,6 306:11,13 324:13,15 333:7 334:9 346:3,7 347:8 347:12,17 359:19 432:18 441:20 444:16 444:23 445:5 445:13 478:16	478:21 481:22 485:6 493:8,20 494:18 497:3 499:3,25 508:7 510:20 518:12 526:20 527:7 527:10 558:3,5 558:6,8,9,12 558:15,17,18 558:21 559:23 <b>surrounding</b> 338:14 <b>survey</b> 459:5 463:14 <b>surveyed</b> 473:8 <b>surveys</b> 452:23 463:4 <b>sustain</b> 453:8 <b>sustained</b> 365:18 <b>swerve</b> 316:13 316:17 <b>swerving</b> 316:20 <b>switched</b> 274:14 <b>sworn</b> 275:3,4,5 305:4,5 332:15 332:16 345:11 345:12 441:6,7 443:24,25 483:13,14 492:17,18 510:7,8 518:1 518:2 525:15 525:16 561:7 <b>Synapse</b> 359:23 <b>system</b> 272:24 310:10 313:22 313:22 322:10 326:19 353:2 357:12,21,24 358:1 366:23 385:20 386:23 401:18 426:8 426:12,18	427:4 <b>systems</b> 322:1 328:14 340:17 379:13 380:22 385:25 386:7,8 387:8,11,15,17 387:21 507:13 <hr/> <b>T</b> <hr/> <b>T16</b> 448:13 <b>table</b> 335:4 376:15,20 384:7 398:8 408:7 410:9,22 416:1 419:15 419:17 420:3 421:15,15,17 429:21 430:9 439:3,15,15 453:9 454:22 463:12 <b>tabs</b> 391:22 <b>take</b> 305:1 322:19 328:4 328:11 336:15 336:18 344:5 344:23,24 345:10 354:17 356:20 368:9 369:8 370:3 373:17 374:3,9 374:18 375:1 375:13 376:3 378:6,10 381:24 382:1,9 382:23,24 383:4,25 397:16,17 398:6,12,18 399:11,12,15 400:18 402:12 413:4,6 419:14 420:5 421:14 423:5 425:12	455:2 461:13 475:24 478:9 482:19 483:2 488:15 492:1 515:23 516:5 517:7 <b>taken</b> 330:22,24 338:15 339:1 345:1 365:3 407:4,5 424:22 426:10,20 432:11 487:9 488:22 561:8 561:12 <b>takes</b> 274:25 312:12 345:9 363:5 377:17 <b>talk</b> 299:8 314:6 327:19 362:23 366:25 489:1,5 490:3,23 491:4 524:2,4 <b>talked</b> 329:3,5 330:17,18 367:22 375:25 377:10 378:1 382:18 390:18 397:21 408:15 417:21 436:6 478:12 532:7 <b>talking</b> 280:18 318:6 322:7,11 357:8 361:23 364:8,9 369:3 374:23 377:19 379:18,22 385:25 390:8 394:19 404:25 409:12 410:12 417:1 420:1 430:12 471:25 473:10 491:6 498:6 499:13 500:7,17,21
---	---	---	--	---

552:4	397:22 399:9	465:15,16	335:23 337:1	518:13,16,19
<b>talks</b> 341:19	400:15 409:3	472:19 473:16	337:22 343:16	518:23 522:23
415:21 450:3	418:23	473:17,19	345:25 346:4,7	526:7,8,12,20
450:11,16	<b>technology</b>	480:23 489:14	346:16 347:9	526:25 527:6
481:24 538:17	326:3 370:12	524:10	347:13,16,17	535:21,24
539:6 540:21	370:13 389:9	<b>territory</b> 426:7,8	348:15 349:24	538:11,22
540:22 542:7	392:15 394:25	<b>testified</b> 275:11	353:5,9,23	541:6,8 545:13
554:8	401:1 402:6	289:3 332:20	354:5,6 355:11	546:5 547:10
<b>tall</b> 311:6,15	409:6 410:4	345:15 441:13	357:9 358:13	558:3,5,6,8,9
<b>taller</b> 406:1	435:18	444:4 483:18	359:19,20	558:11,12,14
<b>tangent</b> 489:10	<b>technology's</b>	492:22 510:12	360:4,11,12,15	558:15,17,18
489:11,20	389:13	518:6 525:23	360:22,24,25	558:20,21
490:1,4,17,18	<b>tell</b> 366:14 404:9	535:22 538:22	366:10 367:15	559:21,23
491:5,7,16	427:22 437:15	541:7	369:3 376:6	561:6,7
492:8	467:10 489:18	<b>testify</b> 434:13	380:6 383:25	<b>Texas</b> 349:2,2
<b>tangents</b> 489:5	546:9 549:10	435:8	384:7 386:21	439:24
<b>target</b> 357:18	554:9	<b>testifying</b> 275:20	387:22,23,25	<b>text</b> 346:22
<b>tax</b> 394:10,15	<b>telling</b> 504:20	305:16 333:2	390:2 394:5	394:22
511:11,16	<b>tells</b> 385:19	359:25 444:12	395:2 401:11	<b>thank</b> 275:6
512:12,14,17	<b>temperature</b>	513:15	407:22 408:8	276:14,24
512:20,21	381:1,2	<b>testimonies</b>	411:20 415:2	277:3 280:23
513:1,2,4,4,12	<b>ten</b> 357:16	356:20 359:3	415:14,15	282:14 285:11
513:18 514:23	364:20 393:2	391:21 445:2	416:8 426:22	285:20 298:12
515:13,15	432:10 501:18	527:10	428:23 429:13	298:14,19,23
517:3,4,6	501:18 502:24	<b>testimony</b>	429:21 432:24	305:6 306:19
519:19,25	<b>ten-year</b> 357:18	275:23 276:3	433:4,8 438:10	313:21 317:19
520:1,10,12,20	<b>tenants</b> 277:24	276:11 277:5	439:23 440:7	317:22 321:4,5
520:25 521:7	277:25	283:18,21	441:20,24	321:7,10,13,15
522:2,15 523:7	<b>tend</b> 387:2	284:25 285:4	442:2 444:17	332:3,4,17
523:11,16,16	<b>tender</b> 276:12	285:23 288:13	444:19,23	334:6,19 335:1
<b>taxes</b> 520:15,18	306:18 334:17	288:15,16	445:3,5,10,14	335:6 339:10
520:25 521:2	347:21 442:9	289:6 305:20	456:17 457:6	339:11,21
523:22 524:25	445:19 485:19	305:23 306:4,6	460:11,17	340:18 341:18
<b>taxing</b> 521:3	511:22 519:2	306:8,11,13	477:3 478:16	342:3,8,11,13
<b>Taylor</b> 271:24	527:10	312:3 314:2,9	483:10 484:7,9	342:17 344:1,3
561:4,18	<b>term</b> 331:4	314:10 318:3	484:13,20,25	344:25 345:13
<b>tear</b> 315:10	455:18	318:14,20	485:2,6 488:3	347:5,11 348:1
<b>technical</b> 528:22	<b>terminology</b>	319:1,5,9	493:9,13,20	348:9 350:14
<b>technically</b>	455:17	320:3,8,13,17	494:18 498:3,5	352:11,19,21
482:8,10	<b>terms</b> 321:23	321:8,11	507:11,16	356:11,13,14
<b>techniques</b>	331:8,23	324:14 327:9	508:6 510:20	356:16 357:6
317:6	367:23 393:12	327:21 333:7	510:24 511:17	373:3 375:5,6
<b>technologies</b>	405:6,11	333:11 334:10	511:17 513:7	396:24 424:3,4
369:12 371:4	407:12 463:24	334:14 335:11	513:11 514:1	424:6,21

428:16,18,22	551:12,13,17	470:4,14	<b>TIGER</b> 271:24	420:2 442:3
429:4,8,9	552:12,14	473:21 474:9	<b>tight</b> 547:24	444:12 445:10
433:5 435:20	555:6,8,20	477:11 479:17	548:23	484:20 485:12
440:23 441:1,8	<b>thereto</b> 276:12	480:25 481:2	<b>till</b> 330:11	493:19 508:6
441:10 442:11	561:14	482:18 490:23	<b>Tim</b> 273:11	509:8 511:8
442:20,25	<b>thesis</b> 343:6	492:10 496:11	359:20	518:19,20
443:1,3,5,17	<b>thin</b> 472:13	504:22 505:15	<b>time</b> 276:10	525:14 526:16
443:20 444:1,3	<b>thing</b> 370:6	509:6 524:20	284:15 306:16	527:3 530:22
445:21 449:10	376:21 383:7	527:23 528:7	312:12,16	533:15
454:9,10 460:8	439:10 460:24	528:23 531:24	317:3,21	<b>today's</b> 517:8,13
460:9,11 462:6	460:25 499:14	535:16 542:19	326:11 327:18	<b>told</b> 373:20
462:12,16,24	524:15 542:14	544:18 546:2	347:21 357:16	407:8 423:1
470:13 474:23	548:2	546:20 548:19	383:21 384:2	443:8 475:13
474:25 476:15	<b>things</b> 313:16	549:16 553:10	390:10 404:6	<b>tomorrow</b>
479:20 480:11	316:19 359:3	<b>thinking</b> 312:25	405:12 406:2	377:17,24
480:17 481:6	388:1 419:7	<b>third</b> 286:16	430:24 435:17	555:13
481:11,15,17	503:8 506:4	334:1,3 385:18	436:9,19	<b>top</b> 384:7 392:11
482:14,17	512:21 550:18	408:12 418:19	442:19 445:17	392:21 409:9
483:4,15,17	<b>think</b> 274:12,13	447:25	454:15 482:3	438:25 456:22
485:21 486:9	284:13,16	<b>Thirty-six</b> 423:7	492:5 504:20	533:6 534:1
487:13,14,25	289:24 299:3	<b>thirty-three</b>	529:19	540:21
488:1,3,8	320:20 323:9	384:15	<b>timed</b> 482:22	<b>topic</b> 358:21
492:14,15,19	326:2 329:3	<b>Thorpe</b> 561:4,18	<b>times</b> 323:7,15	434:22 499:13
492:24 493:12	351:18 359:23	<b>thought</b> 274:5	326:22 330:8	512:10
494:1,9,14,23	360:25 362:2,6	394:21 437:19	338:9,12	<b>topography</b>
500:24,25	363:6,13,14	482:9 552:5	346:21 456:16	461:2
506:5,8,12,18	369:19 370:1	<b>thoughts</b> 437:21	491:19,19	<b>tops</b> 423:17
506:22 509:16	371:21 373:18	522:17	492:7 501:18	433:21
509:17,18,20	374:21 380:12	<b>thousand</b> 337:13	501:20,22	<b>tornado</b> 507:18
510:6,9,11	382:4 384:15	553:15	502:24 505:8	507:19
512:6 514:4,13	388:18 389:8	<b>threatened</b>	515:16 534:13	<b>total</b> 393:12
514:15 516:8	390:8 391:5	359:14	535:1,6,11	456:19 459:14
517:16,18,24	402:5 404:9	<b>three</b> 312:14	<b>tiny</b> 464:1,2,4	463:13 473:16
518:3,5 519:11	410:15 414:16	339:8 450:12	<b>title</b> 391:14,16	534:14 546:20
520:7 522:19	415:1,6 417:7	453:12 459:1	417:15,17	<b>touched</b> 512:10
522:20,22	417:17 423:1	484:9 499:7	484:2 533:6	<b>tour</b> 288:21,25
523:1 525:8,11	423:22 424:25	510:25 512:16	552:7	289:6,10,18
525:17,21	427:25 431:3	528:2 553:7	<b>titled</b> 401:17	<b>toured</b> 288:17
527:7,12,18	434:6 436:2,20	<b>three-acre</b> 281:4	410:3 537:14	<b>tower</b> 376:20
530:7,11	437:21 438:2	<b>three-quarter</b>	<b>today</b> 274:4	377:5,14,19
533:20 537:5	438:23 443:13	326:8	275:20 276:6	378:7 382:19
544:16 545:2	455:20 457:7,8	<b>thumb</b> 467:10	305:16 306:6	384:21 405:7
547:4 549:25	457:13 458:11	501:18	334:10 347:14	405:11,13,17
550:1,5,7,10	461:14 464:14	<b>tie</b> 362:13	396:7 410:13	406:1 407:13

408:2	282:2,5 283:3	522:3,15	509:23 517:21	282:19 284:17
<b>towers</b> 376:21	283:4 284:3,7	523:22 524:1	517:23 533:19	285:2 286:12
377:6,12,22	284:22 286:1	529:5 537:13	533:20 556:9	287:9 288:12
378:17 404:23	288:17,18	538:18 539:8	556:12,17,18	326:5 335:14
407:19 408:13	289:7,11,23	540:22 543:23	<b>Tripp305</b> 556:8	335:23 353:4
408:16,17	305:17 308:19	554:16,20	<b>Tripp332</b>	355:10 363:25
501:15 502:22	309:2,5,22	556:3	556:10	392:18 404:15
<b>township</b> 448:14	310:1,20	<b>traveling</b> 505:2	<b>Tripp444</b>	410:7 453:2
448:24 449:2,4	313:24 314:22	<b>traverse</b> 298:9	556:15	489:22 494:21
449:5,6,7,8	314:25 315:13	<b>traverses</b> 310:13	<b>trouble</b> 481:7	<b>turned</b> 473:9
<b>track</b> 493:10	315:19,25	<b>treat</b> 340:21	<b>truck</b> 507:20	474:2
555:11	316:5 317:2	<b>treated</b> 478:6,7	<b>true</b> 276:3 318:4	<b>turns</b> 489:25
<b>tracker</b> 372:8	318:5,22 319:3	478:7	318:15,21,25	<b>Turpin</b> 274:8,17
<b>tracking</b> 372:5	320:5,11	<b>trees</b> 397:10	319:6,10 320:4	274:25 275:2
372:16,18	324:22 325:1,7	<b>tremendous</b>	320:9,14,18	275:11,15,16
382:13 412:18	325:13 331:24	435:15 504:17	326:19 327:3	276:11 277:5
<b>tracking's</b>	333:3 338:8,11	<b>trend</b> 392:25	328:14 347:17	285:10 556:4
372:10	341:14 348:22	393:4 436:3	359:11,17,18	558:5
<b>tractor</b> 310:21	348:23 353:18	<b>trends</b> 401:12	360:3,11	<b>Twain</b> 284:2,7
310:25 311:3,7	354:8,11	<b>tried</b> 456:7	366:10 386:25	352:3 354:1
311:16	357:11,15,19	457:22	398:4 442:5	362:3 363:1
<b>tracts</b> 465:18	357:20,24	<b>triennial</b> 353:23	484:16 485:9	366:18 431:7
<b>Tracy</b> 271:24	358:1,6,10,11	361:15 362:7	493:16 498:10	431:10 440:9
561:4,18	362:16 366:23	<b>trip</b> 527:25	511:18 518:23	440:11 451:25
<b>traditional</b>	425:16 426:14	<b>Tripp</b> 272:2	524:13,15	453:19 486:13
368:5,6	426:17 427:4,5	305:7,8 306:16	<b>truly</b> 397:14	486:16,20
<b>trained</b> 340:12	428:3,9,12,13	311:9 321:16	<b>truthful</b> 544:10	487:1,5,10
<b>training</b> 343:4,9	432:1,2,9,12	321:17 332:3,7	<b>try</b> 336:14	496:3,7,13
358:6,22	432:12,14,15	332:18,21	434:23 435:1	497:16 498:3
<b>transaction</b>	432:21 433:1	334:16 342:21	455:23 464:2	498:19 499:4
392:23	433:11 440:9	342:22 343:24	478:1,2 499:8	503:1 507:23
<b>transcript</b> 271:5	444:13 451:21	344:1 443:21	503:20 520:8	520:4,10 523:8
364:10 434:3	453:19 472:21	444:2,3,5	<b>trying</b> 317:20	523:17 525:1
<b>transition</b>	484:3 486:13	445:17,21	326:10 397:14	537:12 538:18
308:23	486:17,21	449:13 458:3	425:24 455:22	539:8 540:22
<b>translates</b>	487:1,5,10,21	458:14,20	456:9 478:4	543:22
324:17	494:25 495:2	463:1,2 466:8	503:24 527:25	<b>Twelve</b> 399:21
<b>transmission</b>	496:8,13	466:11,14,18	545:24 546:2	<b>two</b> 275:18
271:13,16	497:16 498:3	467:15,22	<b>turbine</b> 356:9	281:2 287:15
272:5,11	498:19 499:4	469:11,13,17	392:22 393:20	298:3 313:3
275:10,21	501:6,9,15	470:10,16	405:12 407:12	316:4,19 325:4
277:11 279:16	505:1,11,20,23	471:4,7 476:13	<b>turbines</b> 405:4,4	326:25 336:7
280:13,14	507:13,15	476:15 478:23	405:7,9	343:9 349:20
281:5,21,25	520:11 521:2	481:19 482:15	<b>turn</b> 280:3	356:20 358:21

361:13 369:12 372:12 374:15 383:2 390:9 395:14 430:22 431:15 432:19 433:18 438:22 439:9 448:18 453:12 458:18 459:1,11,13 460:3,18 477:15 482:3,4 482:6,7,10 507:12,15 537:3 548:2,19 552:23 553:1,5	366:19 529:12 <b>unaffected</b> 471:21 472:18 474:14 <b>undefined</b> 369:18 <b>underground</b> 502:13 504:15 505:1,6,12,19 506:4 <b>underlie</b> 409:21 <b>underlying</b> 395:25 497:9 498:4 <b>underneath</b> 316:5 402:25 448:16 <b>undersea</b> 506:3 <b>understand</b> 277:9,20 299:4 325:9 329:18 340:4 341:6 345:3 353:17 354:1 355:1 361:6,8,16 362:10,11 367:17,18,21 371:8 381:20 386:6 398:1 405:20 426:1 427:25 437:13 461:10 470:19 489:4 495:2 498:12 500:14 503:21 508:7 515:11 549:14	487:4 498:18 498:22 509:7 528:1 532:16 536:18 542:5 542:13 552:1 <b>understood</b> 315:23 321:25 437:22 529:3 <b>undo</b> 434:23 <b>unfolds</b> 555:1 <b>unfortunately</b> 391:24 465:6 <b>Union</b> 408:15 <b>unit</b> 517:14 <b>United</b> 272:15 272:20 276:25 277:2 298:22 307:3 317:25 319:22 320:23 337:3,14 339:16 344:7 345:4 349:1 364:21 398:3 442:24 446:8 446:20 447:11 451:16,20 462:17 481:16 486:8 494:13 506:23 509:15 514:9 519:16 530:12 531:8 540:17 543:9 551:18 553:25 557:9 559:20	<b>updates</b> 403:23 <b>upgrade</b> 358:2 429:23 <b>upgrades</b> 357:24 <b>upped</b> 362:11 <b>upwards</b> 492:7 <b>urban</b> 289:12,14 505:14,18,21 505:23 <b>USDA</b> 328:4 <b>use</b> 280:15 282:13 283:5 309:16,25 310:20 312:10 315:1,5 322:23 322:23 323:13 323:14 331:4 358:15 368:5 372:1 381:10 381:12,18 384:19 386:12 390:24 393:25 401:21 407:19 412:12,20 413:1 419:3 428:2 434:18 440:2 470:25 471:5 480:25 489:15 495:4 495:11 502:2 505:20 549:22 <b>usually</b> 322:17 322:20 326:24 501:16 <b>utilities</b> 341:13 419:3 430:6,17 <b>utility</b> 284:20 285:25 343:19 358:10 379:13 380:21 381:7 384:10 385:10 386:1,8 387:9 387:15,16,20 409:6 428:7,9	430:1 433:1 436:13,13 528:10 <b>utility-scale</b> 423:3 <b>utilization</b> 404:21,21
<b>V</b>				
<b>two-mile</b> 461:1 <b>two-pager</b> 438:22 <b>type</b> 309:9 325:8 433:14 435:17 435:18 <b>typewriting</b> 561:9 <b>typical</b> 310:24 <b>typically</b> 506:4 <b>typographical</b> 333:12	<b>understand--</b> 314:20 <b>understanding</b> 274:4 289:7,10 318:17 321:22 331:7,10 427:13,21 477:3 486:25	<b>University</b> 343:10 355:21 355:22 <b>unknown</b> 317:11 380:25 <b>unreasonable</b> 372:14 <b>unresponsive</b> 453:7 <b>update</b> 343:22	<b>updates</b> 403:23 <b>upgrade</b> 358:2 429:23 <b>upgrades</b> 357:24 <b>upped</b> 362:11 <b>upwards</b> 492:7 <b>urban</b> 289:12,14 505:14,18,21 505:23 <b>USDA</b> 328:4 <b>use</b> 280:15 282:13 283:5 309:16,25 310:20 312:10 315:1,5 322:23 322:23 323:13 323:14 331:4 358:15 368:5 372:1 381:10 381:12,18 384:19 386:12 390:24 393:25 401:21 407:19 412:12,20 413:1 419:3 428:2 434:18 440:2 470:25 471:5 480:25 489:15 495:4 495:11 502:2 505:20 549:22 <b>usually</b> 322:17 322:20 326:24 501:16 <b>utilities</b> 341:13 419:3 430:6,17 <b>utility</b> 284:20 285:25 343:19 358:10 379:13 380:21 381:7 384:10 385:10 386:1,8 387:9 387:15,16,20 409:6 428:7,9	<b>validity</b> 374:24 <b>Valley</b> 272:18 <b>valuation</b> 523:25 <b>value</b> 278:8,12 410:24 433:24 436:5 438:13 520:20 521:7 <b>values</b> 280:15 283:5 520:23 524:20,24 525:3,5,7 <b>variable</b> 370:17 419:11 <b>variables</b> 370:24 <b>variety</b> 367:24 <b>various</b> 287:17 287:23 288:3 360:21 368:20 370:6 376:12 388:1 <b>vary</b> 338:3 <b>Verde</b> 350:6,23 351:15 429:19 430:10 <b>verifications</b> 555:2 <b>verify</b> 274:2 332:5 344:5 360:20 371:2,5 384:2 397:18 397:20 555:12 <b>version</b> 464:17 <b>versus</b> 284:20 286:1 346:8

367:2 369:10	<b>W</b>	505:2,2	<b>we've</b> 410:12	348:20 349:1,3
374:23 387:25	<b>wait</b> 330:11	<b>way</b> 286:17	412:23,25,25	349:3 430:5
415:21 455:6	396:20	287:12 317:11	420:1,22 456:1	435:16,19
501:15 522:3	<b>walk</b> 329:23	324:12 325:14	547:20 554:21	<b>westernmost</b>
522:15	<b>want</b> 274:5	325:18 331:25	<b>weakest</b> 436:14	445:6
<b>vertical</b> 490:18	285:19 305:12	362:18 368:2	<b>Webpage</b> 560:7	<b>wetlands</b> 359:10
<b>Vickie</b> 275:11,15	314:12 317:10	415:19 416:10	<b>website</b> 341:7	465:10 473:3
275:16 276:11	329:24 330:13	443:13 455:16	461:4	<b>white</b> 467:3
556:4 558:5	335:22 340:4	476:23 477:12	<b>WECC</b> 348:21	<b>width</b> 460:19
<b>view</b> 272:13	346:6 352:1	478:3,7 480:10	348:23,25	500:8,22 503:5
432:21 438:1	369:9,12	480:21 486:11	349:12 429:17	<b>wildlife</b> 359:6
480:1 549:19	377:21 384:1	490:18,20	429:22 430:6	446:21 450:19
<b>Vision</b> 368:4,11	408:19,20,21	499:14 524:24	430:13,21	450:25 451:21
395:15,22,23	413:10 417:20	537:20 546:1	431:15,16	475:25 476:6
396:1,6,12	420:15 426:1	549:18 554:14	<b>weeks</b> 349:20	543:13,16,20
397:19 399:12	449:15,17	<b>ways</b> 325:17	<b>weighs</b> 311:6,16	551:4 554:23
400:21 403:22	460:24 462:19	403:8 440:17	326:20	<b>William</b> 271:21
408:21 409:22	467:10,23	<b>we'll</b> 290:7	<b>weight</b> 326:18	332:20,24
410:4 413:4,6	471:15,16	306:1 332:12	326:19,21,24	333:7 345:15
413:7,15,22	478:19 481:7	363:4 377:16	327:1,3,3	345:21,24
416:15,18,24	489:2 502:3,5	377:23 464:15	<b>Welch</b> 539:19	346:8 556:10
417:4,19,20	504:23 508:19	480:3,3,6,8	<b>welcome</b> 375:3	557:10 558:3
436:25 438:12	530:21 546:15	481:1,1 483:3	428:17 462:7	559:21
438:13 559:7	552:18 553:8	487:20 489:5	479:21	<b>Williams</b> 273:4
<b>vol--</b> 502:16	<b>wanted</b> 285:16	555:12	<b>went</b> 325:4	273:6 274:12
<b>voltage</b> 425:21	435:10 461:24	<b>we're</b> 274:13	438:3 470:21	276:20,21
426:17,19,22	464:21 482:2	299:8 322:7	532:23	278:18 298:16
502:15 504:23	508:21 512:10	328:2 344:25	<b>weren't</b> 396:5,5	306:23 443:15
505:1	515:5 533:8	350:15 370:23	397:3	446:2,3 462:12
<b>voltages</b> 502:11	544:19 545:1	371:24 373:4	<b>west</b> 349:2,2	481:11 527:18
502:16,17	<b>wasn't</b> 340:14	374:23 379:22	350:7,23	527:19 530:6,7
504:19 505:18	396:11 427:7,7	406:4 410:22	351:16 429:20	550:10,12
<b>volts</b> 504:4,8,9	460:1 514:25	415:2 424:21	430:10 448:14	551:13 557:6
504:11	515:6,12	424:24 425:1	448:15,25	<b>Williams'</b>
<b>Volume</b> 271:9	<b>water</b> 310:10	441:3 461:8	449:3,4,5,7,8,9	274:13
290:9 299:11	313:8 322:16	471:11 472:4,5	<b>Westen</b> 273:5	<b>Williams550</b>
<b>Vosberg</b> 274:21	322:21 323:3,6	472:5 473:18	335:1,3,6,7,8	557:7
344:10 345:5	323:11,13	474:17,22	442:18 512:6,7	<b>willing</b> 450:18
441:3,5,13,17	<b>watt</b> 379:14	475:20 476:4	512:8 519:10	524:8
441:18 556:13	383:19 384:23	478:3,4 482:19	<b>Westen335</b>	<b>wind</b> 341:15
558:17	386:5,9,9	483:4 499:13	556:11	353:11 354:13
<b>Voss</b> 442:10	412:8,25	500:7 503:20	<b>Westen512</b>	354:17,21
<b>voted</b> 426:24	416:13	504:3 509:21	557:1	355:4 356:1,2
<b>VT-SR-2</b> 284:25	<b>wave</b> 503:18	517:20 555:15	<b>western</b> 286:5	356:3,5,9

361:1,11,13	414:14,18	<b>Wisconsin</b> 286:5	446:10 454:19	315:6 323:17
362:3,8,12,17	415:21 416:15	505:8	463:3 464:13	372:17 418:25
363:2,10,17,20	416:15,17,17	<b>Wiser</b> 401:8	465:22 466:15	423:20 448:7
363:20,24	416:18,23,23	<b>Wiser's</b> 400:25	467:11 468:9	471:22 503:5
364:18,19,23	416:25 417:3,4	<b>witness</b> 274:8	469:18 470:20	547:14
364:24 365:21	417:10,19,20	275:5 280:9	471:8,22 475:1	<b>written</b> 358:21
365:24 366:3,7	419:22,25	285:11 305:5	509:25 542:17	538:5
366:14,17,19	420:22 421:3	306:18 311:21	543:14 556:14	<b>wrong</b> 398:25,25
367:2 368:4,5	421:25 422:2	332:6,16 336:2	558:14,15	421:5,15
368:10 369:2,5	422:11,14,16	342:6 344:7	<b>wooded</b> 468:1	427:22 549:10
369:10,17	422:22 425:19	345:4,12 347:2	<b>Woolf</b> 359:20,23	
370:10,16,18	433:14,19	347:6,21	360:15,21	<b>X</b>
374:7,7,8,23	435:12,14,15	350:10 357:6	<b>Woolf'S</b> 360:10	<b>X</b> 326:20,20
374:24 376:11	435:19,22,25	365:11 387:8	<b>word</b> 319:17	<b>xxiii</b> 402:12
376:19 379:18	436:4,7,12,14	413:11 414:7,8	320:20 333:24	<b>xxx</b> 404:8
382:1,5,17,18	436:16,17,25	415:5 421:9	334:1,3 346:18	<b>xxxvi</b> 398:21,23
383:3,9,10,10	437:3,5,25	425:3 434:15	368:9 370:3	<b>xxxviii</b> 404:15
383:18,20	438:7,12,13,14	435:2,3 437:24	395:9 428:2	<b>Y</b>
384:23 385:3	439:17,18	441:7,10 443:5	496:10,11	<b>Y</b> 271:20
387:25 388:15	440:11 511:12	443:25 445:19	511:1 534:15	<b>yeah</b> 318:13
389:9,13	512:11,14	458:5,9,25	<b>words</b> 326:9	329:5 411:13
390:17 391:4	513:22,25	462:3 466:9,12	354:23 369:10	455:9,23
392:10,15,22	515:13 516:6	476:10,14	516:10	458:25 460:13
393:13,15,15	516:10,11,16	478:22,24	<b>work</b> 277:6,13	461:23 464:12
394:6,11,12,14	516:17,23	482:23 483:14	324:3,5,8	464:19 466:21
394:16,25	517:2,12,14	492:18 509:20	341:25 356:6	470:8,23
395:1,15,22,23	559:7	510:8 518:2	371:22 428:14	472:12 473:2
396:1,6,11,12	<b>window</b> 548:13	522:9 525:13	444:10 446:14	476:18 478:22
397:5,5,19,22	<b>windows</b> 548:11	525:16 532:19	481:24 547:9	482:6 489:9
398:2 399:9,12	548:17	538:25 539:10	547:13 554:14	501:3 505:8
400:15,21	<b>winds</b> 416:7	541:4 547:4	<b>worked</b> 284:15	508:5 513:8
401:1 402:4,6	<b>windshield</b>	555:9	328:20 427:21	525:14 548:23
403:4,10,22,24	326:7	<b>witnesses</b> 274:4	432:12 446:15	549:4 550:17
403:25 404:5	<b>wing</b> 350:7,23	274:23 344:10	549:14	553:14
404:22,23	351:16 429:20	345:6 555:11	<b>working</b> 554:21	<b>year</b> 313:6 330:8
405:4 406:7	430:10	561:7	<b>works</b> 381:20	355:19 385:16
407:2,22 408:8	<b>winter</b> 548:17	<b>wondering</b>	<b>workshop</b> 451:4	411:1,7 422:9
408:12,20	<b>wipes</b> 326:7	418:1 476:21	<b>world</b> 324:7	422:12 547:24
409:22 410:4,4	<b>wire</b> 502:8	<b>Wood</b> 274:21	339:2 505:22	<b>years</b> 312:15
410:8,10,10,13	504:13,16	344:10 345:5	<b>worst</b> 411:6	328:6,8 343:5
410:20 411:6	528:17,18	441:4 443:6,11	413:16 416:17	343:9,14
413:4,5,6,7,8	<b>wires</b> 489:12,13	443:12,16,19	416:24 417:4	357:16 364:21
413:14,14,15	490:14,20	443:23 444:4,6	<b>worth</b> 351:24	385:4 393:2
413:21 414:5	491:24 500:12	444:8,15	<b>wouldn't</b> 285:18	

431:1 432:10	<b>1,285</b> 384:23	448:25 449:4	504:4	558:19
<b>years'</b> 436:9	<b>1,311</b> 383:19	493:9,25 494:1	<b>1500</b> 412:8	<b>1901</b> 272:8
<b>Yep</b> 452:21	384:9	494:3,4,22	<b>154</b> 463:21	<b>192</b> 370:1
<b>yesterday</b>	<b>1,340</b> 362:16	509:11,13	<b>156,816,000</b>	<b>195</b> 379:14
530:16 531:13	<b>1,347</b> 362:8,12	513:19 535:15	423:11	<b>1978</b> 355:21
532:7,22	362:17,20,22	535:16,17	<b>157</b> 423:14,21	<b>1981</b> 355:22
533:16,18	363:1,7	558:7	<b>15th</b> 548:14,15	
535:21 552:6	<b>1,600</b> 381:12,13	<b>114</b> 516:4	<b>16</b> 282:17,20	<hr/> <b>2</b> <hr/>
<b>yield</b> 311:25	381:20 382:6	<b>117</b> 439:16,19	284:18 333:24	<b>2</b> 350:2 355:11
327:7,11,13	412:11,25	440:2	334:1 350:25	390:7,12 430:4
<b>York</b> 505:18	<b>1,625</b> 379:3	<b>12</b> 335:25	380:13 399:13	447:22 449:7
	381:11	399:19,24	399:15,19,21	460:17,18
<hr/> <b>Z</b> <hr/>	<b>1,758</b> 413:6,14	449:2,9 510:21	400:11 444:24	494:21 497:7
<b>Zachary</b> 460:22	413:16,18	511:3,3,8,22	445:18,23,24	500:2 535:14
469:5 482:5	<b>1,777</b> 381:15,24	511:24 512:1,2	535:1 558:15	<b>2--</b> 503:21
508:13 528:3	382:9,25 383:8	558:9	<b>160</b> 463:21	<b>2-19</b> 532:23
529:8,9,10	384:20 412:13	<b>125</b> 406:5 516:2	<b>1600</b> 412:8	533:7 534:2
530:3 546:16	<b>1,882</b> 381:21	<b>125.30</b> 420:2	416:12	551:21 552:20
<b>zero</b> 489:23	<b>1.2</b> 503:2	<b>13</b> 335:25 364:4	<b>1604</b> 409:19	<b>2-21</b> 531:8
<b>zone</b> 361:19,19	<b>1.3</b> 379:14	375:20 376:15	<b>161</b> 426:17	532:25 534:3
361:21 362:3,4	<b>1.50</b> 385:23	399:19,21	496:5,8,14	544:22 560:13
362:9,17,25	386:5	400:6 449:4,7	507:23 528:15	<b>2-3</b> 399:3
363:11 366:18	<b>1:30</b> 424:19	449:8 484:7	530:3	<b>2-5</b> 404:25
375:25	<b>10</b> 289:20	485:19,23,24	<b>1625</b> 379:16	<b>2,000</b> 371:11,12
<b>zoned</b> 282:9	305:24 306:2	534:13 558:10	<b>167.8</b> 422:2,15	<b>2,032</b> 376:25
<b>zones</b> 361:13	306:17,19,21	<b>130-foot</b> 311:6	<b>17</b> 284:18	378:6,10 382:1
<b>zoning</b> 282:10	346:20 351:4	311:15	429:21 441:21	<b>2,377</b> 378:18
<b>zoomed</b> 461:9	384:13 403:25	<b>14</b> 333:20	442:9,13,15	382:1 383:8
	448:25 449:5	364:14 385:11	558:16	<b>2,400</b> 413:11
<hr/> <b>0</b> <hr/>	513:2,18 516:1	386:17 416:1	<b>1700</b> 414:21	414:24 417:6
<b>0057</b> 560:12	516:3,4 545:13	434:6 448:25	<b>1758</b> 410:20,25	<b>2,600</b> 386:9
	546:20 558:6	484:25 485:19	416:23	<b>2,889</b> 386:14
<hr/> <b>1</b> <hr/>	<b>10-foot</b> 492:3	485:23,24	<b>18</b> 289:5,9 337:1	<b>2.1</b> 545:14,25
<b>1</b> 282:18,23	<b>10-year</b> 416:5	535:11 558:12	346:18 349:5	<b>2.2</b> 461:11
337:4 398:10	<b>10:25</b> 344:25	<b>1470</b> 409:19	351:23 372:10	<b>2.4</b> 422:12
399:11,13,16	<b>100</b> 383:9,10	<b>15</b> 289:5,8	431:4,8 435:12	<b>2.89</b> 277:16
419:15,17	472:22	346:20 353:23	445:6 449:5	279:18
445:4 449:7	<b>100-acre</b> 322:18	444:20 445:18	518:13 519:2,4	<b>20</b> 346:22 372:6
451:16 458:3,5	<b>100-meter</b>	445:23,24	519:6,7 558:18	372:11 382:11
497:7 500:1	376:21 384:21	448:25 489:23	<b>18.5</b> 422:5	383:1,14,15
560:10	408:16	489:23 511:3	<b>1802</b> 272:18	384:20 393:7
<b>1,200</b> 471:17	<b>100,000</b> 491:12	558:13	<b>181</b> 449:2	403:24 404:2
472:2	547:5,7	<b>150</b> 406:5 470:9	<b>19</b> 337:2 511:4	501:22 505:7
<b>1,208</b> 417:2	<b>11</b> 275:18	500:9 503:5	527:6,13,14,15	526:7,15 527:7
<b>1,222</b> 448:24				



527:13,14,15 558:21 <b>200</b> 273:7,13 503:1 504:2,8 504:9 517:7 <b>2003</b> 430:11 <b>2005-2010</b> 405:12 <b>2007</b> 400:4 <b>2008</b> 393:7 403:23 <b>2009</b> 393:1,3 <b>2010</b> 407:6 <b>2011</b> 430:13 <b>2013</b> 385:11,17 385:18,25 386:8 399:7 404:13 422:2 422:15 439:7 <b>2014</b> 361:15 373:23 376:25 377:7 382:2,5 382:17 383:17 384:22 389:9 389:13 394:18 414:5,14,24 416:2,5 436:7 447:22 451:19 468:18 473:17 517:1 529:15 529:16 534:6 534:10,23 543:16 <b>2015</b> 392:23 395:1 397:24 398:4 405:23 409:18 414:21 417:10 418:11 420:12 439:12 439:13,13 519:23 536:7 539:18 541:15 <b>2016</b> 271:7 379:2 382:6,10	384:11 385:1,3 395:20 436:7 555:23 <b>2017</b> 512:18 <b>2018</b> 512:18 <b>2019</b> 394:17,18 412:7 512:16 512:19 <b>2020</b> 395:2,23 404:1 409:18 410:17,18 411:2,24 412:7 413:21,24 414:19,21,25 416:7,13,16,20 416:25 419:18 419:22,23,24 512:23 513:16 513:23 515:8 <b>2021</b> 512:22,25 <b>2025</b> 409:19 420:24 421:1,4 421:6,23 422:15 439:7 <b>2030</b> 403:24 404:2 414:21 <b>2040</b> 414:21 420:19 <b>2050</b> 404:2 <b>206</b> 449:3 <b>21</b> 335:23 348:17 526:22 552:8 <b>21st</b> 447:22 468:18 536:7 <b>22</b> 372:7,10 412:6,16 413:1 414:1 416:14 417:1 448:25 457:5 497:3 500:1 512:24 516:5 <b>222-page</b> 369:24 <b>2230</b> 273:13	<b>225</b> 400:24 401:4 <b>227</b> 401:6 <b>23</b> 282:17,20 448:25 449:3 497:4 500:1 512:17 513:21 515:16,21 <b>234.9</b> 421:3,24 422:15 <b>2368</b> 409:18 <b>2377</b> 377:7 414:13 <b>24</b> 333:17,20 449:3 <b>2400</b> 414:5,12 414:13,14,18 <b>25</b> 298:2 <b>25,000</b> 491:8 <b>252</b> 277:20 279:6,17,21 463:13 <b>259-page</b> 397:12 <b>26</b> 271:7 346:23 347:2 457:6 512:24 539:17 <b>260</b> 386:8 <b>2600</b> 385:15 <b>27</b> 333:24 334:4 375:14 379:6 379:11 386:21 386:22 445:4 555:23 <b>271</b> 560:6 <b>275</b> 556:4 <b>276</b> 558:5 <b>277</b> 556:5 <b>278</b> 559:24 <b>27th</b> 541:15 <b>28</b> 369:6 376:9 390:20 407:20 408:3 <b>281</b> 560:3 <b>283</b> 560:4	<b>291</b> 290:9 <b>296</b> 556:5 559:7 <b>297</b> 290:10 559:24 560:3,4 560:6 <hr/> <b>3</b> <hr/> <b>3</b> 282:18,23 346:22 353:9 387:23 388:8 445:4 450:10 497:3 499:2,7 499:25 <b>3,200</b> 386:10 <b>3,555</b> 386:14 <b>3,600</b> 423:5 <b>3:10</b> 483:4 <b>30</b> 342:7 343:5 343:14 431:1 489:23,24 512:24 516:5 517:6 <b>30.9</b> 377:3 378:11 <b>300</b> 299:11 361:10 448:13 516:23 556:6 <b>304</b> 299:12 <b>306</b> 558:6 <b>307</b> 556:8 <b>31</b> 378:11 448:15 449:9 460:16 <b>314</b> 272:13 <b>314.341.5769</b> 272:14 <b>314.554.3955</b> 272:10 <b>319.249.5248</b> 272:23 <b>32</b> 411:6 413:8 413:17,18 416:18 448:15 <b>320</b> 386:9	<b>3200</b> 385:15 <b>321</b> 556:9 <b>33</b> 363:10,15 377:11,16,23 460:16 513:20 <b>334</b> 558:3 <b>335</b> 333:18 <b>339</b> 556:11 <b>34</b> 353:4,9 <b>341</b> 560:7 <b>342</b> 556:12 <b>344</b> 560:7 <b>345</b> 502:17 <b>345,000-Volt</b> 271:16 <b>348</b> 557:11 559:21,23 <b>348-page</b> 397:11 <b>35</b> 286:12 383:3 404:2 460:16 <b>350352</b> 559:19 <b>352</b> 557:11 <b>359</b> 333:17 <b>36</b> 287:9 369:4 448:14 449:8 <b>360</b> 273:8 <b>367</b> 558:23 <b>37</b> 369:4 370:10 378:21 384:1,6 <b>37.5</b> 377:8 378:21 <b>373</b> 558:24 559:3,4 <b>38</b> 383:11 <b>389</b> 559:6 <b>39</b> 408:24 541:11 <hr/> <b>4</b> <hr/> <b>4</b> 280:3,7,11,17 281:8 346:24 347:4,4 445:5 445:6 450:15 497:6 499:3,7
---	---	---	---	--

499:7 500:1 511:2,4 <b>4.5</b> 404:12 <b>40</b> 371:12,12 391:13 393:7 408:24 409:6 439:24 512:18 513:21 515:17 515:21 <b>400</b> 504:11 <b>400-and-some</b> 476:20 <b>406</b> 559:9 <b>41</b> 347:6 <b>411424</b> 559:10 <b>418424</b> 559:12 <b>42</b> 346:1 347:20 348:2,4 353:8 559:21 <b>420</b> 559:13 <b>424</b> 558:23,24 559:6,7,9,13 <b>429</b> 557:13 <b>43</b> 346:4 347:21 348:2,4 438:20 559:22 <b>440</b> 449:6 <b>441</b> 556:13 <b>442</b> 558:17 <b>445</b> 558:14,15 <b>446</b> 556:15 <b>447</b> 560:9 <b>449</b> 560:9 <b>45</b> 439:25 489:24,24 <b>450</b> 361:1 <b>451</b> 457:16,19 458:1 459:8,14 560:10 <b>4520</b> 273:1 <b>454</b> 560:10 <b>458</b> 407:10 <b>460</b> 556:16 <b>46032</b> 272:22	<b>463</b> 556:17 <b>467</b> 559:15 <b>469</b> 559:16 <b>47</b> 392:18 533:19 544:21 552:2,4,5 <b>476</b> 556:17 <b>48</b> 283:24 <b>481</b> 556:18 <b>483</b> 556:19 559:15 <b>485</b> 558:11,12 <b>486</b> 556:20 <b>488</b> 556:21 <b>492</b> 556:22 <b>494</b> 556:23 <b>495507</b> 560:12 <hr/> <b>5</b> <hr/> <b>5</b> 280:3,7,11 282:17,20 333:8 334:17 334:19,21,22 346:18,23 347:3 353:9 384:13 412:10 479:14 558:3 <b>5,494</b> 413:9,12 413:19 <b>50</b> 371:13 536:2 <b>50,000</b> 333:22 <b>50/50</b> 372:10 <b>500</b> 362:12 <b>500,000</b> 333:22 <b>507</b> 556:24 <b>510</b> 559:16 <b>512</b> 558:9 <b>514</b> 557:1 <b>518</b> 557:3 <b>519</b> 557:3 558:18 <b>52</b> 539:13,17 <b>523</b> 557:4 <b>527</b> 557:6	558:20,21 <b>53</b> 394:23,24 <b>530</b> 557:6 <b>531545</b> 560:13 <b>536</b> 560:15 <b>54</b> 363:25 364:8 364:13 434:7 <b>540</b> 560:16 <b>543545</b> 560:18 <b>545</b> 560:15,16 <b>552</b> 557:8 <b>56</b> 278:22,23 279:2 559:24 <b>57</b> 281:11,15 560:2 <b>573.443.3141</b> 272:4 <b>573.616.1486</b> 272:19 <b>573.639.7615</b> 273:2 <b>573.751.5558</b> 273:14 <b>573.751.6514</b> 273:9 <b>58</b> 283:10,14 560:4 <b>58.7</b> 420:25 421:24 <b>59</b> 290:3 448:24 449:4,5 <b>59-HC</b> 560:5 <b>5th</b> 451:19 <hr/> <b>6</b> <hr/> <b>6</b> 280:4,8,11,17 281:8 282:18 282:22,23 284:17 335:14 335:15 346:23 347:2 364:3 375:9 387:23 388:10 419:14 543:16 546:18	546:25 547:2 558:24 <b>6-9</b> 451:16 560:10 <b>6,424</b> 378:21 382:19 <b>6,554</b> 378:13 382:19,24 383:5 <b>6.16</b> 376:15,18 <b>6.17</b> 376:16,20 <b>6.8</b> 422:9 <b>60</b> 338:9,12,25 341:1,5 344:15 344:17,19,20 448:14 449:2,6 489:24,24 512:18 513:21 515:17 547:2 560:7 <b>60-mile</b> 546:25 <b>600</b> 423:2,4,23 492:10 <b>61</b> 350:15,18 352:13,16,17 429:12 449:7,8 559:18 <b>62</b> 367:7,8,12,22 368:14 379:8 379:23 385:8 386:17 424:8 424:11,13 558:22 <b>63</b> 373:2,6 375:13,14 376:4,9 385:7 424:8,11,13 558:24 <b>63026</b> 272:13 <b>63166</b> 272:9 <b>64</b> 373:8,10,13 373:17,18 375:3 515:23 516:6 559:2	<b>64111</b> 273:2 <b>65</b> 373:8,10,13 373:18,19 374:1 375:3 559:4 <b>65102</b> 273:8,14 <b>65109</b> 272:18 <b>65205</b> 272:4 <b>66</b> 389:20,21,22 389:25 392:15 394:1 424:8,11 424:13 559:5 <b>66149</b> 272:9 <b>67</b> 396:15,17 397:2 399:11 400:18 408:20 409:25 424:13 436:24 559:7 <b>68</b> 406:18,19,22 407:1 408:12 424:13 559:8 <b>69</b> 411:12,13,14 411:17 412:6 424:13 466:3,5 559:10 <hr/> <b>7</b> <hr/> <b>7</b> 271:9 333:17 337:1 347:6 355:13 387:23 448:15 <b>7--</b> 394:24 <b>7,360</b> 419:25 <b>7.5</b> 322:17 <b>70</b> 418:2,3,7 424:13 559:11 <b>71</b> 420:5,7,10,16 424:8,12,14 438:16 559:13 <b>712</b> 370:10 <b>72</b> 394:1,4,24 399:8 447:1,2 447:3,7 449:20 449:22,23
---	---	--	--	---

462:22 468:14 475:6 560:8 <b>720</b> 272:22 <b>73</b> 396:3 451:9 451:13 454:8 454:12,13 462:19,22 475:6 513:22 515:18,23 560:10 <b>73.60</b> 515:7 <b>74</b> 466:17,19,20 467:16,17,19 467:20 479:24 483:6 517:23 559:14 <b>75</b> 439:17,18 469:14,15,19 469:20 509:14 509:24 510:1,3 510:4 559:16 <b>750</b> 322:19 <b>76</b> 495:17,21 506:25 507:1,3 507:4 560:11 <b>77</b> 531:1,5 544:14,20 545:4,6 552:3 552:10,19 560:13 <b>77's</b> 544:21 <b>775-acre</b> 277:14 <b>78</b> 536:25 537:7 544:15 545:4,6 560:14 <b>79</b> 540:10,14 544:15 545:5,6 560:16	355:13 415:22 448:14 509:13 535:6 <b>8-10</b> 543:9 554:5 560:18 <b>8-6</b> 447:11 468:15 560:9 <b>8,885</b> 382:14 383:4 <b>8:30</b> 555:20,23 <b>80</b> 281:4 376:24 377:22 383:18 408:8,13 512:17 513:21 515:17 517:2 543:2,6 544:15 545:5,6 554:2 560:17 <b>80-meter</b> 376:20 377:11,22 378:7 382:23 405:13 406:6 407:19 408:2 408:17 <b>8081</b> 413:2 414:2 416:12 <b>85</b> 381:18	<b>90-degree</b> 489:25,25 <b>90s</b> 356:3 <b>918</b> 272:3 <b>92</b> 516:6 <b>939</b> 271:24 561:4 <b>95</b> 460:25 505:16 <b>95-mile</b> 461:17		
<hr/> <b>8</b> <hr/> <b>8</b> 288:12 289:5,8 290:9 299:11 335:15 346:19 348:19 351:4,5	<hr/> <b>9</b> <hr/> <b>9</b> 275:18 276:12 276:16,17 346:19 380:5,8 380:16,20 381:3,6,10,13 383:16 386:12 412:12,20 413:1 416:14 417:1 448:25 448:25 494:21 515:22 558:4 <b>90</b> 489:24 490:8 491:11,15 492:7 517:2 <b>90-</b> 311:6,15			