BEFORE THE PUBLIC SERVICE COMMISSION

STATE OF MISSOURI

TRANSCRIPT OF PROCEEDINGS

Evidentiary Hearing

Wednesday, June 7, 2023 8:35 a.m. - 6:57 p.m.

Missouri Public Service Commission 200 Madison Street Governor Office Building Room 310 Jefferson City, MO 65101 and WebEx

> VOLUME X Pages 587 - 852

In the Matter of the Application)
of Grain Belt Express LLC for an)
Amendment to its Certificate of)
Convenience and Necessity) File No.
Authorizing it to Construct, Own,) EA-2023-0017
Operate, Control, Manage, and)
Maintain a High Voltage, Direct)
Current Transmission Line and)
Associated Converter Station)

NANCY DIPPELL, Presiding
CHIEF REGULATORY LAW JUDGE

SCOTT T. RUPP, Chairman MAIDA J. COLEMAN JASON R. HOLSMAN GLEN KOLKMEYER DR. KAYLA HAHN,

COMMISSIONERS

Stenographically Reported By: Beverly Jean Bentch, RPR, CCR No. 640

Job No. 146199



	Transcript of Proceedings	June 07, 2023				
1	APPEARANCES:	Page 588				
2	On behalf of Grain Belt Express, LLC:					
3	Polsinelli 900 West 48th Place, Suite 900 Kangag City MO 64112-1895					
4	Kansas City, MO 64112-1895					
5	BY: ANNE E. CALLENBACH, ESQ. ANDREW O. SCHULTE, ESQ. SEAN PLUTA, ESQ.					
6	JARED JEVONS, ESQ.					
7	acallenbach@polsinelli.com aschulte@polsinelli.com spluta@polsinelli.com					
8	jjevons@polsinelli.com					
9	On behalf of the Staff of the Public Service Commission:					
10	Public Service Commission					
11	200 Madison Street, Suite 800 P.O. Box 360					
12	Jefferson City, MO 65102					
13	BY: TRAVIS PRINGLE, ESQ. travis.pringle@psc.mo.gov					
14	On behalf of Clean Grid Alliance:					
15						
16	Clean Grid Alliance PO Box 4072 Wheaton, IL 60189-4072					
17						
18	BY: SEAN BRADY, ESQ. sbrady@cleangridalliance.org and					
19	BY: JUDITH A. WILLIS, ESQ. (Local counsel)					
20	jaw@anniewillislaw.com					
21	On behalf of Dustin Hudson, Gary and Carol Riedel Missouri Landowners Alliance, Eastern Missouri	- ,				
22	Landowners Alliance, and Norman Fishel:					
23	485 Oak Field Court Washington, MO 63090					
24	BY: PAUL AGATHEN, ESQ.					
25	paa0408@aol.com					



	Transcript of Frocedurings Sufficient, 2020
1	Page 589 APPEARANCES: (Continued)
2	On behalf of the Missouri Electric Commission:
3	Healy Law Offices 3010 East Battlefield, Suite A
4	Springfield, MO 65804
5	BY: PEGGY A. WHIPPLE, ESQ. ALEX RILEY, ESQ.
6	peggy@healylawoffices.com alex@healylawoffices.com
7	
8	On behalf of Renew Missouri:
9	Renew Missouri PO Box 413071
	Kansas City, MO 64141
10	BY: ALISSA GREENWALD, ESQ.
11	alissa@renewmo.org
12	On behalf of the Sierra Club:
13	Great Rivers Environmental Law Center 319 N. 4th Street, Suite 800
14	St. Louis, MO 63102
15	BY: SARAH W. RUBENSTEIN, ESQ. (WebEx) srubenstein@greatriverslaw.org
16	On behalf of the Office of the Public Counsel:
17	200 Madison Street, Suite 650
18	PO Box 2230 Jefferson City, MO 65102
19	BY: NATHAN WILLIAMS, ESQ.
20	Nathan.Williams@opc.mo.gov
21	On behalf of Missouri Cattlemen's Association, Missouri Corn Growers Association, Missouri Farm Bureau, Missouri
22	Pork Association, Missouri Soybean Association:
23	827 East Broadway Suite B
24	Columbia, MO 65201
25	BY: BRENT E. HADEN brent@showmelaw.com



Page 590 1 APPEARANCES: (Continued) 2 On behalf of Associated Industries of Missouri: 3 ELLINGER & ASSOCIATES, LLC 308 East High Street, Suite 300 Jefferson City, MO 65101 4 5 MARC H. ELLINGER, ESQ. mellinger@ellingerlaw.com 6 Also Present: 7 WILLIAM W. HOLLANDER 8 114 South Laclede Station Road St. Louis, MO 63119 9 ahollander@wionhollander.com 10 PATRICIA STEMME 12601 E. Remie Road 11 Centralia, MO 65240 pstemme56@gmail.com 12 13 14 15 16 17 18 19 2.0 21 2.2 23 24 25



Page 591

1	The following proceedings began at 8:35 a.m.:					
2	JUDGE DIPPELL: Let's go on the record. Good					
3	morning. It's June 7, Wednesday, and we are back on the					
4	record in EA-2023-0017. Mr. Chandler has taken the					
5	stand once again. We were in the middle of his cross.					
6	And we were up to Mr. Agathen. Would you like to go					
7	ahead, Mr. Agathen?					
8	MR. AGATHEN: Thank you, Your Honor. Morning,					
9	Mr. Chandler.					
10	THE WITNESS: Good morning, sir. How are you?					
11	MR. AGATHEN: Good. How are you?					
12	THE WITNESS: Fantastic.					
13	KEVIN CHANDLER,					
14	having been previously sworn, was examined and testified					
15	as follows:					
16	CROSS-EXAMINATION					
17	BY MR. AGATHEN:					
18	Q. Could you turn to page 6, please, of your					
19	direct testimony?					
20	A. Yes, sir.					
21	Q. The bullet point beginning at line 7 says that					
22	Grain Belt has secured voluntary signed easements on					
23	approximately 72 percent of the existing route across					
24	Kansas and Missouri, correct?					
25	A. Yes, sir.					



- Page 592 1 72 percent is a combined figure for both Q. 2 Kansas and Missouri, right? 3 Α. Yes, sir. Isn't it true that for the existing route in 4 Ο. 5 Missouri that figure is less than 54 percent? 6 No, sir. Α. 7 What percent of the easements for the Tiger Q. Connector line has Grain Belt secured? 8 9 Less than five. Α. 10 On a different subject, based on the last CCN Ο. case, that was EA-2016-0358, Grain Belt is obligated to 11 12 pay landowners for a voluntary easement in an amount 13 equal to 110 percent of the fair market value of the 14 land plus an additional amount for any structures on the 15 property. Is that generally correct? 16 Yes, I believe so. Α. 17 And your proposal for the Tiger Connector line Ο. is to pay 150 percent of the fair market value of the 18 19 easement property but with no payment for structures; is 20 that correct? 21 Α. That is correct. 2.2 0. How much money will Grain Belt avoid by 23
 - eliminating the payment for structures on the Tiger Connector line?
- 25 In general we would expect to pay Α. None.



landowners more by offering 150 percent and no structure payments on the Tiger Connector.

1

2

3

4

5

6

8

9

10

15

16

17

18

19

20

21

22

23

24

- Q. Right. Breaking down these into component parts, how much would you save by not paying anything for the structures on the Tiger Connector line?
- So if you look at in general the total amount Α. 7 paid to landowners for the Tiger Connector with 150 percent, even without structure payments will be more than they would have received with 110 percent plus structure payments given the nature of the -- the 11 monopole payment compensation, monopole compensation in 12 our easement agreement is significantly less than a 13 lattice tower. So given that, the payment for Tiger 14 Connector landowners will be greater with 150 percent.
 - Ο. You keep saying that. What I'm trying to get at is how much will you save by not paying for any of the structure supports?
 - Α. If the 150 percent is approved, we will not save any money by not paying for structure supports.
 - How much will you avoid paying? If you had to Q. pay structure supports for the Tiger Connector line at \$6,000 per monopole, how much would that amount to?
 - So I think one way to look at this, if you imagine a 10-acre easement and we assume \$10,000 in value per acre for that easement, on the upper end you



2.2

would expect to see roughly three structures in that easement. So if you paid landowners under the previous -- under the HVDC structures, they would expect to receive, I believe, roughly \$128,000. Under the Tiger Connector payment, that would be \$150,000. So there's no savings associated with not paying structures.

- Q. Well, if you don't pay structures, how much would you have paid were you paying for structures?

 You're not answering that question.
- A. So I think if you, you know, we would anticipate -- I think the estimated number of structures is is in Aaron White's testimony. So I think if you look at that number, it's roughly 176, I believe, or around 180. So if you do \$6,000 per structure, you can arrive at the math what we would pay, but it's not a savings to the Project given the 150 percent proposed payment.
- Q. Have you done an analysis of how much you'll have to pay for 150 percent of the fair market value?
- A. We have not done a Project-wide analysis of that number given that we are early in our conversations and don't have set values for each parcel.
- Q. So if you don't have a figure for the fair market value, 150 percent of the fair market value for the easements, and you don't have a figure for what

- would have been paid for the structures, you can't really tell at this point that every landowner is going to benefit by your new proposal. Some are going to benefit, some won't benefit.
- A. I think if you look at the -- If you take the 10-acre example that I provided and size that up or down, it's easy to arrive at the assumption that the vast majority of landowners would benefit.
 - O. So some won't?

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

- A. I can't say that for certain.
- Q. If they were going to have say three structures on the small piece of property, they would have been better off by getting payment for the structures, would they not?
- A. It's unlikely that a small piece of property would have three structures.
- Q. Two structures? I'm just asking isn't it possible that some landowners are going to fare worse under your proposal? I mean, counsel in his opening statement said that many are going to fare better. I assume that means many or some won't?
- MR. SCHULTE: For the record, I believe it was quoted back to me earlier in this proceeding that I said vast.
- 25 | THE WITNESS: I would agree with counsel the

- vast majority. It is possible that a small number may not.
 - BY MR. AGATHEN:

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

22

23

24

- Q. Okay. Let's leave it at that. On a different subject, at page 17 of your direct testimony you discuss other proposed modifications to the conditions imposed by the Commission in the last CCN case, correct?
 - A. Yes, sir.
- Q. And looking at page 18, beginning at line 9, under the conditions imposed in the last CCN case, Grain Belt was not allowed to begin construction of any portion of the line until after it has secured financing for the entire Project. Is that generally correct?
- A. Yes, sir.
 - Q. And Grain Belt is now asking the Commission to allow it to begin construction of the first Phase of the line even if it hasn't secured financing for the second Phase; is that generally right?
- A. Yes, sir.
- Q. That proposal is generally called phasing?
- 21 A. Yes, sir.
 - Q. And Phase I generally consists of the portion of the Project in Kansas and the portion in Missouri between the Kansas border and the converter station in eastern Missouri; is that correct?



- A. Yes, sir, in Monroe County.
- Q. Yes. So under Grain Belt's proposal most of the Missouri portion of the line could be built even if Grain Belt decides for whatever reason not to build the Illinois portion of the line; is that correct?
 - A. Yes, sir.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- Q. And the Project would then deliver a total of only about 2500 MW instead of the 5000 MW now being proposed by Grain Belt; is that correct?
 - A. Yes, that is the capacity of Phase I.
- Q. And under that scenario, there would be no direct interconnection between the Grain Belt Project and the PJM market, would there?
 - A. Under that scenario, that would be the case.
- Q. Are you aware of the Commission's finding in the last case at page 44 of the Report and Order on Remand which stated that the portion of the line which will sell into the PJM markets is what demonstrates the financial viability of the Project overall?
- A. I am not particularly familiar with the previous Order.
 - Q. So you're not familiar with that provision?
 - A. Not directly, no, sir.
- Q. I have just a few questions regarding your surrebuttal, page 6 in particular.



A. I'm there.

1

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

- Q. In general, you're again speaking there of the need for phasing of the Project, correct?
 - A. Yes, sir.
 - Q. At line 6 of page 6, you mention that Grain Belt did not receive approval for the Project from the Illinois Commerce Commission until March of this year, correct?
 - A. Yes, sir.
 - Q. And then at lines 7 to 8 you say that as a result, the land acquisition process significantly trails the process in Kansas and Missouri, correct?
 - A. Correct.
 - Q. Are you aware of any law or regulation which would have prevented Grain Belt from going forward prior to the issuance of the Illinois Order in March with all of the preliminary steps which are needed before actual acquisition of easements?
 - MR. SCHULTE: Objection. It calls for a legal conclusion.
- JUDGE DIPPELL: He can answer if he is, in fact, aware.
- THE WITNESS: I am not aware.
- 24 BY MR. AGATHEN:
 - Q. Did you start any activity in Illinois prior



1	to the issuance of the Illinois Commerce Commission's					
2	Order?					
3	A. Can you be more specific as to what you mean					
4	about activity?					
5	Q. Direct activity related to the acquisition of					
6	easements.					
7	A. No, sir.					
8	Q. Isn't it true that in Missouri Grain Belt had					
9	already completed its acquisition of some of the					
10	easements for the line even before the Commission					
11	approved the CCN?					
12	A. Are you speaking of the for the main HVDC					
13	for the HVDC route?					
14	Q. Correct. That the Grain Belt had secured					
15	easements for that main route even prior to the time					
16	that the Commission had issued the CCN Order?					
17	A. I do not know.					
18	MR. AGATHEN: That's all I have.					
19	JUDGE DIPPELL: Thank you. Is there					
20	cross-examination from the Ag Associations?					
21	MR. HADEN: Yes, Your Honor. Good morning,					
22	Mr. Chandler. I've got a few questions for you.					
23	CROSS-EXAMINATION					
24	BY MR. HADEN:					
25	O. In your direct testimony you talk there about					

1 the public meetings that were held for the Tiger 2 Connector line. I'm looking at, oh, I think page 10, 3 page 11, in that range. 4 MR. SCHULTE: Of which? Direct or 5 surrebuttal? 6 His direct. The direct, yeah. MR. HADEN: 7 Yes, sir. THE WITNESS: BY MR. HADEN: 8 9 And so did you go to those meetings? 0. I did. 10 Α. 11 You went to all of them in person? Ο. 12 Α. Yes. Who else was there from Grain Belt, if anyone? 13 Ο. 14 We had several representatives from the Grain Α. 15 Belt Project development team, our community affairs and 16 public affairs team and several consultants particularly 17 associated with the WSP routing. 18 And was Brad Pnazek there? Do you remember? Ο. 19 Yes, I believe he was. Α. 20 Just for background, who is Brad Pnazek? Q. 21 He's a Vice President of Transmission Business Α. 2.2 Development for Invenergy. 23 Is he the one running this Project as far as Ο. 24 the actual on-the-ground-work to build it; is that fair? 25 He heads the Grain Belt development team. Α.

- Q. What is that? What do they do?
- A. So the Grain Belt Project development team is essentially responsible for land acquisition, supporting local engagement efforts and general Project coordination.
- Q. Okay. And so when you say "general Project coordination," that is kind of general by its nature. What falls under that heading?
- A. That's a great question. It's sort of everything from helping to coordinate and facilitate communication among internal teams and generally pitching in to make sure that the Project is proceeding as planned.
- Q. And I know your direct testimony on the front page you sort of talk about your role. Specifically as it relates to this Project, is this the only Project you're assigned to for Invenergy or do you work on other Projects right now?
 - A. I am entirely focused on Grain Belt.
- Q. And within the -- sorry. Let me scratch that. Was that true back during these public meetings last year as well?
- 23 A. Yes.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

Q. Now, at those meetings, did you receive any landowner input?



A. We did.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- Q. Did you incorporate any of those comments into the plan that you proposed on the final plan going forward?
 - A. You referring to the Tiger Connector route?
- Q. Yeah, what we're talking about today. So the Tiger Connector. I'm not talking about most of the back half of Phase I and I'm not talking about Phase II. I know we talked about all that in '16. I'm talking about Tiger Connector.
 - A. Yes, we did.
- Q. I think just so we're both clear, the question was did you incorporate some landowner comments and you said?
- A. Yes, we did incorporate landowner comments into the Tiger Connector route.
- Q. Okay. And so did any of the -- Well, before I ask you that. How was the final route decided, if you know? I'm not talking about from the technical aspect, but I'm saying as between one route versus the other because there were ultimate ones proposed. How was the final one picked?
- A. So you know, I think the general analysis behind the route selection was described in the routing study submitted by Andrew Burke on behalf of WSP. I



- think at a high level the goal of selecting the Tiger Connector route was to minimize impacts to natural and cultural resources and the human environment. So when we were comparing the different routing options, we selected the one that best accomplished those goals in accordance with the siting guidelines that were laid out I believe in Section 2.3 of that routing study.
- Q. I mean, was landowner input any part of that decision ultimately? So I'm not talking about method. I'm talking specifically about routing right now.
 - A. Yes.

- Q. So were you more likely to route around a landowner that had a complaint or how did that work?
- A. No. In general, the landowner comments were incorporated as a way to guide us around certain general features both on their property and in the landscape of the counties. So for example, you know, a goal in the Tiger Connector routing was to minimize and avoid impacts to center-pivot irrigation. So a number of landowners indicated where center pivots were on their properties. We also analyzed potential center-pivot irrigation on properties throughout the Tiger Connector route and sought to avoid those. That's one example.
- Q. Okay. So I guess that's what I'm trying to figure out. Does landowner input ultimately have



anything to do with whether you take the line over a given property or not?

- A. So what we did was at the public meetings at that point we had a network of segments that were illustrated to the public and landowners and the public were given the opportunity to view those segments. They were also given the opportunity to provide a comment either via a comment card or providing comments directly on the maps that were laid out at those public meetings. And the public input was incorporated in the selection of the -- in the narrowing down of the potential routes associated with the Project and then from there we identified I believe three potential routes and the final route was selected as the best of those options.
- Q. I guess what I'm asking, I mean, there's a lot of comments in this stack obviously?
 - A. Sure.

- Q. And some of them, I don't think I'm overstating are in the spirit of just we don't want you, don't come near us. I think maybe the one I just picked at random and just looked at was close to that. Does that factor into your determination as to whether you go over that property or not? Does a comment like that make a difference?
 - A. So ultimately, you know, we want to take

Page 605

landowner input into account in the routing process, but
at the same time we can't make a decision that is going
to make things markedly worse for other landowners. We
have to look at the best overall route. If you look at
the route that was selected, that route crosses I
believe the fewest total number of parcels, impacts the
fewest number of small landowners, doesn't impact
center-pivot irrigation, crosses the fewest number of
streams, has the most property boundary in parallel
which allows us to avoid impacting those center-pivots
and avoid so when you look at we are looking at
the holistic ability of that route to minimize the
impacts that we set out to minimize.

- Q. So is there a concerted effort to hit the fewest landowners as possible?
 - A. Not necessarily.

2.2

- Q. Okay. And I think I heard you say that it would impact the fewest small landowners. Is there a concerted effort to hit large landholders harder than small landholders?
- A. I think in general when you look at smaller properties they are more likely to have homes on them and it becomes more difficult for us to route farther from those homes. Again, if you look at Route B that was chosen in the routing study has the fewest homes.



Page 606

- think there's only one home within 500 feet, one identified home within 500 feet of center line. And so if you look -- again, going back to the small parcels, they're more likely to have homes and we strive to keep the line within a reasonable distance or not -- back up, within -- It's preferable generally to have the line farther from a home.
- Q. Well, under Missouri law you have to pay more if you're within 300 feet of a home, correct, if you know?
- A. I am not familiar with that part of Missouri law.
- Q. Are you familiar with any of our taking statutes? And just let me clarify before you answer that. I don't want the next thing you tell me say my lawyer told me, because I'm not trying to get in the middle of your attorney/client privilege. Just as to the general question, regardless of the source, I'm not asking about the source, are you familiar with our taking statutes?
- A. I am not familiar with the text -- not generally familiar with the text of taking statutes.
- Q. Okay. Is there anybody on the team other than a lawyer, because I don't want to know what they've told you, is there anybody on your team other than an

- attorney that is, I mean, within -- let's say within

 Brad Pnazek's purview that he's managing, is there

 anybody on that team that knows Missouri taking

 statutes?
 - A. I think -- Yes, again we are involved in those processes, but we are not attorneys.
 - Q. Okay. Similarly, do you know if there has been any concerted effort to either cross or avoid property that has more than 50 years of ownership within a family?
 - A. I am not aware.

6

7

8

9

10

11

14

18

19

21

2.2

23

24

- 12 Q. You don't know if that was part of the decision either way?
 - A. For the Tiger Connector route?
- Q. Yeah, for the routing of Tiger Connector.

 Sorry, to be specific, yes.
- 17 A. That was not a part of the decision making.
 - Q. You're certain that's never been part of the decision making?
- 20 A. I believe so.
 - Q. To your knowledge, do you know whether the -Well, let me back up, because you may not be aware. Do
 you know whether or not the Company, now I'm talking
 about anywhere along the Phase I lines going all the way
 back to the Missouri-Kansas line, do you know if the



Company has sued any landowners to obtain easements yet?

- A. Yes, there are a number of condemnation cases that have been filed.
- Q. Do you know if any of those were filed as far as their timing to avoid the imminent tolling of a 50-year ownership time for a given plot?
 - A. No, I do not know.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- Q. Just so I'm clear on that, you don't know -Other than a conversation with an attorney for the
 Company, do you know of any conversation ever within the
 Company that gave the directive to move ahead with a
 suit so the 50-year timing would not run on a given
 parcel? Does that ever happen, to your knowledge?
 - A. Not to my knowledge.
- Q. Are you certain that it hasn't happened? I understand always -- I'm not asking you to prove a negative. I mean, has somebody represented to you no, we would never do that or has that just not been a topic of discussion?
- A. That has not been a top of discussion that I've had.
- Q. Same question then as far as condemning within 300 feet of a residence. Do you know if a decision has ever been made, other than from a conversation with an attorney, just a decision inside, has been made to

- pursue litigation where that decision was affected by the question of proximity of the line to a residence? Α. Not to my knowledge.
- And specifically what I'm thinking of here, 0. for example, have you ever heard that they say hey, we've got to hurry up and sue because they're about to build a house and then we'll have to pay them more? Anything like that within the Company, not from your attorneys but within the Company?
 - Α. Not to my knowledge.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

- Has there ever been any discussion tactically 0. within your team that looking forward that would be a tactical consideration of when and how to litigate against landowners?
 - Α. Not to my knowledge.
- Is there anybody else on your team who would 0. know or who would be involved in decisions like that that you could identify?
- MR. SCHULTE: I'm going to object. I think that the witness has stated that he's not aware of any conversations ever happening. And so there's --
- MR. HADEN: I can rephrase the question and you may still object to the rephrase but I can try. BY MR. HADEN:
 - So if a decision like that was being made Q.

1 within your team, what person would make that decision? 2 In terms of who decides when to file a 3 condemnation case? 4 So I'm not trying to be MR. SCHULTE: 5 difficult but you said that decision. I think that the 6 question is unclear and vague. So which decision are 7 you referring to? 8 MR. HADEN: Fair enough. 9 BY MR. HADEN: 10 So let's just walk through the ladder here. Ο. 11 As a broad principal, who makes the decision on when you 12 will stop negotiating and file a condemnation suit 13 against a landowner? 14 I mean, I think that's typically a collective 15 decision and the decision to make to file a condemnation 16 case typically occurs when either a landowner has stated 17 that they have no interest in negotiating with Grain Belt or we have not been able to file them or when the 18 19 negotiations are at an impasse. 20 You said when you have not been able to file Q. 21 them? 2.2 Α. Excuse me. Find them. 23 Thank you. That's what I thought you meant. Q. 24 I just want to make sure I wasn't missing out on

So you mean when you literally

Okay.

25

something here.

can't find, you just don't know where they're at, or you can't get in contact with them; is that what you mean?

- A. Yes, sir, that can happen where a landowner is

 -- we physically can't find them or if there are

 ownership questions that take time to track down.
- Q. Well, and there's a shocking number of unprobated real property parcels in Missouri. It's amazing how many dead people still own property in this state. That is a plausible possibility. Okay. So then in the context of -- Well, I think that answers that question.

Did any landowners for the Tiger Connector tell you they wanted this line buried on their property?

A. Yes.

- Q. And was that possibility ever considered by the Company?
- A. We've generally analyzed the possibility of burying and for reasons that I think are maybe outlined in Aaron White's testimony, came to the conclusion that was not a feasible option for the Tiger Connector route.
 - Q. Why is it not feasible?

MR. SCHULTE: I believe the witness just testified that that's outlined in Aaron White's testimony so it's outside the scope of this witness's testimony.

MR. HADEN: I think that's not true. I mean,
I understand that may be true; but if this witness
knows, I think it's a fair question for him as well. He
handles the PR side with landowners. If he knows, then
I think he can answer that.

JUDGE DIPPELL: I'll overrule the objection.

Speaking not as an engineer but THE WITNESS: from my laymen's understanding, because -- There are several reasons, I think, in general because Tiger Connector is a double circuit line. It will serve two separate markets. So to bury two circuits would require I believe two separate trenches to be dug in order to avoid safety and engineering considerations with having to service a line that serves two markets. there's some federal regulations around that, but at a high level we'd have to bury two trenches. ultimately there are, I think there might be some thermal considerations with the heat of the line that might ultimately cause challenges. But at a very high level burying the line would actually be more disruptive to farmland given those considerations.

BY MR. HADEN:

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

- O. That's what the landowners concluded?
- A. No, that's what the engineering team concluded.



1	Page 613 Q. So that's what Tiger, or I'm sorry, that's				
2	what Grain Belt is telling farmers about their own				
3	operation, right?				
4	MR. SCHULTE: Objection. That's argumentative				
5	and misstates the prior answer.				
6	JUDGE DIPPELL: I don't believe that that is				
7	what the witness said that that's what they were telling				
8	landowners. He said that's what the study concluded.				
9	MR. HADEN: If I could inquire then.				
10	BY MR. HADEN:				
11	Q. Have you ever communicated to landowners that				
12	asked to have the line buried that that was your				
13	conclusion, to your knowledge? When I say "you," I mean				
14	Invenergy. I don't necessarily mean you but to your				
15	knowledge for the Company.				
16	A. I believe there may have been some				
17	communication to landowners about the, again, like the				
18	overall challenges associated with burying the line, but				
19	I'm not aware of specific conversations with specific				
20	landowners about that.				
21	Q. Okay. You don't know whether any landowner				
22	conceded and agreed that that would be more disruptive				
23	to their operation after being told that, assuming that				
24	happened?				

Again, and I'm aware I mentioned

25

Α.

No.

- landowner impacts, but I think it's important to remember there are a whole host of engineering and 3 technical and safety considerations associated with that 4 decision beyond just the landowner impacts. And again, all of that is outlined in the testimony of Aaron White.
 - Invenergy, they have buried a 345 line, 345 kV Q. line in New York, correct?
 - Α. I don't know.

2

5

6

7

8

9

10

13

14

15

16

17

18

19

20

21

22

23

24

- You don't know. Have you worked on any other Ο. Projects at Invenergy besides this one?
- 11 I specifically was hired to work on Grain Α. No. 12 Belt.
 - Fair enough. So the bottom line, you would Ο. agree with me Invenergy, or Grain Belt Express, I know there's a separate LLC, I'm using them interchangeably, they have no plan to bury any portion of this line on any landowner; is that correct?
 - Yes, that's correct. Α.
 - I notice -- So in your, and I'm looking at 0. page 14 now on your direct, there's a line 9 there says please describe the compensation package that Grain Belt Express will use in its negotiation with landowners along the Tiger Connector. Do you see where I'm at?
 - I do. Α.
 - Okay. And you set out in 11, 12, 13 that Q.

Page 615

- 1 | there's 150 percent fair market fee value payment with
- 2 | 20 percent up front and then in 13, 14 and 15 you talk
- 3 | about the balance being either paid as a lump sum or as
- 4 | an annual payment. Obviously lump sum is easy.
- 5 Whatever the number is, that's what gets paid at
- 6 construction, correct, or at commencement of
- 7 | construction? I'm sorry. You're nodding. For the
- 8 record.
- 9 A. I'm sorry.
- 10 Q. That's okay. We all do that. Is that right?
- 11 A. That is correct.
- 12 Q. Okay. What my question is about the annual
- 13 payment for as long as the easement remains in effect.
- 14 | So what is that and how much is that?
- 15 A. So the annual payments start -- So on signing,
- 16 | all landowners receive that 20 percent initial payment
- 17 | irregardless.
- 18 | O. Right.
- 19 A. The annual payment begins with 5 percent of
- 20 | that balance payment and is escalated by 2 percent
- 21 | annually per year thereafter.
- 22 Q. Okay. So let's just take \$100,000 for a nice
- 23 | round number so I make sure I understand the math.
- 24 \$100,000 you get 20 grand up front. If you took a lump
- 25 sum, you get 80 grand at commencement of construction,



correct?

1

3

5

6

7

8

9

10

12

13

14

15

16

17

18

19

21

2.2

23

24

- 2 A. Uh-huh.
 - Q. I think I'm doing the math right?
- 4 A. Sure.
 - Q. I will tell you one of the reasons I have to do this is because I can't do math. So that's why I've got to choose round numbers. So at 100,000 so -- but if you're going to take your annual payment then, you'd get your, and obviously still take \$20,000 up front, right, I mean, the landowner would get that either way?
- 11 A. Yes.
 - Q. And then at commencement of construction in year one they'd be paid \$5,000. That's 5 percent of 100,000. That's the number I'm asking about.
 - A. Without having the easement form or an exhibit showing the payment in front of me, I cannot remember whether it's 5 percent of 100,000 or 5 percent of the 80,000.
 - Q. Okay. It's one of those two numbers?
- 20 A. Yes.
 - Q. Was that -- I don't know that I ever, and I might be wrong, I don't think I ever saw that sheet in any of your scheduled exhibits. I saw the easement form itself but not the underlying contractual document or is it tied into the easement form and I missed it?



- Page 617 1 Let me dig through. Α. 2 Yeah, I'm sorry. Ο. 3 MR. SCHULTE: To speed up the process, the easement form is Schedule KC-4. 4 5 Right, and I've got it. MR. HADEN: 6 Tab 9 in the witness's binder. MR. SCHULTE: 7 Not in your binder. The witness's binder. 8 THE WITNESS: I found it. 9 BY MR. HADEN: 10 Ο. And that is in that KC form, KC-4 schedule filed? 11 12 So the payment is -- The payment terms Α. Yes. 13 are in a separate schedule, sorry, an exhibit. 14 Exhibit, okay. Ο. 15 Α. An exhibit with an easement. Those are 16 typically not recorded and provided to landowners. 17 Even a form of that exhibit or the various 18 potential exhibits was not attached to your exhibit for 19 this proceeding; is that fair? 20 Seems to be fair. Α. JUDGE DIPPELL: Can I jump in really quick 21 2.2
 - because that is a question that I had and was wanting to know if a sample of Exhibit C and D could be provided. I'm looking at your counsel for that guidance.
- 25 As referenced in -- so Schedule MR. SCHULTE:



1	KC-4.
2	MR. HADEN: Yeah.
3	MR. SCHULTE: Paragraph 2a.
4	MR. HADEN: Well, 2 It's in 2 and 2a
5	JUDGE DIPPELL: Mr. Haden, could you address
6	your remarks to the Court so that the court reporter can
7	get everything down?
8	MR. HADEN: I'm sorry. Mr. Schulte, it's in
9	paragraph 2 and 2a there there's a mention of.
10	MR. SCHULTE: Just so I'm clear, which
11	exhibits was the Judge requesting?
12	JUDGE DIPPELL: Exhibit C and D, which are the
13	estimate or easement calculation sheet and the structure
14	estimate and crop compensation calculation. I realize
15	that those might be private to the landowners. But if
16	there is a sample that could be provided.
17	MR. SCHULTE: I'll have to consult with my
18	client before I can make that before I can respond,
19	but I will do so and get back to you.
20	JUDGE DIPPELL: Okay. Thank you. Sorry to
21	interrupt.
22	BY MR. HADEN:
23	Q. Okay. Recognizing we don't have the exhibits
24	attached, the exhibits to the easement attached within
25	this exhibit to the Court, the best you can tell us as

- you sit here right now, I think as you said, just tell
 me if I'm mischaracterizing this, it's either 5 percent
 of the overall amount or 5 percent of the balance; is
 that right?
 - A. Without having that form in front of me, I would say yes.
 - Q. Okay. Whatever it is, it will be what that form says though, I assume?
 - A. Yes.

6

7

8

9

10

11

12

13

23

24

- Q. Okay. I guess the other question then is, again, I think this is all going to be in the exhibit, does that annual payment -- that annual payment never runs out; is that right?
- 14 A. That's right.
- Q. So the Project lasts 30 years, it will pay 30 years; if it lasts 90 years, it will pay 90 years; is that right?
- 18 A. That's right.
- Q. And I know that's beyond forecasted life.

 Just throwing numbers around, whatever that number is it

 will continue to pay, correct?
- 22 A. Yes, sir.
 - Q. Now, if you're not able to get easements, the Company is not able to get easements by negotiation, they are prepared to -- I think you said they already



			•		<u> </u>			
have, but	they'ı	re pre	epared	to sue	land	downer	s undei	<u>-</u>
Missouri	law to	take	those	easemen	ts,	corre	ct?	
Α.	Yes.							
•	1	,		,	,			

2.2

Q. When they, if you know, when they litigate under the taking statute to take the easement, are they seeking to take it and still pay these terms or are they seeking just to go with the bare terms of the statute?

MR. SCHULTE: I object. It's outside the scope of this proceeding and this Commission's jurisdiction when we get into the actual process of eminent domain. The Commission has recognized in previous orders it does not grant eminent domain.

Eminent domain is granted by the legislature pursuant to statute and those statutes provide that the district court will preside over an eminent domain proceeding.

So this is outside the scope of this proceeding.

MR. HADEN: I would, Your Honor. So I mean, we already are in a world where they have -- the Company has attempted to reserve its rights and say look, House Bill 2005 doesn't apply to us. House Bill 2005 dealt -- it amended several different statutes. One of the statutes it amended was 523.010, which I informally call the taking statute because that lays out takings authority. And we've got on the table an idea that

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

25

would even be part of this Order. But as to the fifth
Tartan Factor about the public interest, I think the
Commission has to know what the back half of the process
looks like if there's not a voluntary easement reached,
because I don't want anybody I don't know what the
answer is to what it is going to be to this question and
this witness may not know. I don't want anybody

JUDGE DIPPELL: Hold on, Mr. Schulte.

I don't want anybody to walk away MR. HADEN: though thinking that if it's not the case that when they go to court they're also going to seek to take the easement but pay 150 percent in court if that's not what they're saying they're going to do. I think it does make a difference to the underlying -- I'm not arguing that the PSC can govern eminent domain directly in terms of relative to the circuit court, but I think it's important for the Commission to hear that as it makes the decision about the fifth factor of the public interest as to how the Company plans to conduct itself if this witness knows in those proceedings, because the only reason I say that for foundation the question right before this was is the Company planning to sue landowners to take easements if they can't get them voluntarily and the answer was yes. I think that's where the foundation comes in.



1 JUDGE DIPPELL: Mr. Schulte, you wanted to 2 make another remark? 3 MR. SCHULTE: Yes. We strongly disagree that 4 this Commission is required to determine how the 5 statutes, the eminent domain statutes apply to this 6 That is a matter for the district courts. The Company. 7 statutes apply equally to all similarly situated 8 transmission owners. And every other transmission owner 9 that has come before this Commission for a certificate has not been subject to an analysis of landowner 10 11 compensation process nor has the Commission ever 12 addressed eminent domain proceedings as part of an 13 application for a certificate of convenience and 14 This Commission's role is to view whether necessity. 15 the Project is necessary and convenient for the public 16 interest within its area of expertise regarding electric 17 That does not extend to eminent domain utilities. 18 policy, and so I strongly disagree with Mr. Haden's 19 arguments to the contrary. 20 MR. HADEN: I would like one more chance to 21 respond, if I could, Judge. 22 JUDGE DIPPELL: I would like to just go ahead 23 and rule. I will overrule the objection. 24 objection is noted. The witness can answer if he knows 25 the answer.



1	Page 623 MR. HADEN: That's been about ten minutes ago
2	so I'll ask it again.
3	BY MR. HADEN:
4	Q. So I think the substance of my question is, if
5	you know, in the circumstance, the unfortunate
6	circumstance that the Company moves ahead and sues a
7	landowner to take property, the Company goes to court,
8	is it planning to seek an Order to pay 150 percent as
9	set out, looking at your exhibit here, as set out in
10	that KC-4 exhibit or is it just going to fall back on
11	the statute and say we'll pay whatever the statute says?
12	MR. SCHULTE: I'm just going to note an
13	objection to that based on my previous arguments.
14	JUDGE DIPPELL: Objection so noted and
15	overruled.
16	THE WITNESS: I am not in a position to know
17	what I am not, again not being an attorney, not being
18	the person that files those cases, I am not in a
19	position to state what our plans would be for
20	condemnation.
21	BY MR. HADEN:
22	Q. Okay. Just to be clear then, you're not
23	making a commitment they would do that or they wouldn't

- do that, correct?
- I don't think I'm in a position to make that 25 Α.



commitment.

- Q. That's fair. Okay. I would like to look at the transmission line agreement a little more, this is an exhibit we've actually just been talking about, this is Schedule KC-4.
 - A. Sure.
- Q. This is a public document. Couple questions about it. Give me just one second here. So this is the transmission line agreement that the Company is sending out through its land agents initially to try to obtain voluntary agreement to an easement, correct?
 - A. Correct.
- Q. So far the Company has been using CLS; is that right?
 - A. Contract land staff.
- Q. Thank you. I was about to ask what the abbreviation was. Contract land staff, just for background, I think you'll agree with me, that's a company that -- I mean, it's in the business of contacting landowners and they do this for other utilities as well, is that right, if you know?
- A. I'm not familiar with their business beyond Grain Belt.
- Q. Okay. When they reach out to a landowner, do they send them this transmission easement agreement as a



proposed agreement to see if they'll sign it?

- A. They typically send out an introductory letter introducing themselves and the Project along with other information pertaining like a potential compensation calculation as well as a copy of this easement.
- Q. Okay. Now, this -- Do you know if this is the easement -- or the text of this easement is the same as if the Company were to sue a landowner, would they seek this exact same easement from the court?

MR. SCHULTE: I'm going to object. Again, the condemnation process is governed by the statutes which are passed by the legislature. Those statutes provide that that process is under the purview of the district courts, not this Commission.

MR. HADEN: And Judge, I would respond nobody is arguing that it's not under the purview of the district courts, but it's relevant. It's still relevant to the fifth Tartan Factor as to the public interest. I mean, part of this is because the Company has come here and said look, we're going to acquiesce to the 150 percent provision in Senate Bill 2005 as part of this proceeding, and that's great. It was at Farm Bureau's request. We're happy to recognize that. But then the underlying question though of if they don't get to a voluntary agreement, what sort of easement are they

1	going to seek in court I think is relevant for this	
2	body. Not because of who gets to make that	
3	determination. It's obvious the circuit courts make	
4	that determination. But because it goes to the question	
5	of the public interest as it relates to the request to	
6	tie to these conditions. And so I think it could be	
7	illuminating, I don't know what the answer is going to	
8	be, as to those questions about the text of this	
9	easement agreement as offered voluntarily versus whether	
10	this is also the text they will seek coercively.	
11	JUDGE DIPPELL: Objection overruled.	
12	MR. SCHULTE: If I may respond briefly.	
13	JUDGE DIPPELL: One more time, Mr. Schulte.	
14	MR. SCHULTE: Counsel for Farm Bureau's	
15	argument for relevance relies entirely on his assumption	
16	that the eminent domain process is relevant to the	
17	public interest standard under the Tartan Factors. That	
18	finding has never been made by this Commission. In	
19	fact, the opposite finding has been made that this	
20	Commission does not grant eminent domain or oversee	
21	eminent domain.	
22	JUDGE DIPPELL: And I have previously	
23	overruled that objection and will do so now.	
24	BY MR. HADEN:	
25	Q. So the question, I think the substance of the	

- question is, do you know whether the language set out in this transmission line easement agreement that the Company is going to send out in an attempt to get a voluntary easement, is that the same language they will seek in an Order from the court in a condemnation proceeding?
 - A. I would say that the eminent domain proceedings, not being an eminent domain attorney or outside the area of my general expertise, I am not in a position to state what our plans would be under the scenario for the Tiger Connector. I'll say that our hope is to not have to enter into condemnation.
- Q. Okay. So then working through this language in the second paragraph there towards the end of the second sentence -- well, let's just read that. I want to read that, the beginning of that paragraph 2 to you. It says landowner does hereby grant and convey unto Grain Belt, an exclusive as to the types of Facilities (defined below) perpetual easement, and it defines the Easement as a defined term, to construct, operate, repair and maintain a transmission line, as further described below. Do you see that?
 - A. I do.

2.2

Q. Do you know if the words operate or repair appear anywhere in Missouri's taking statute is



Т	something that a company has a right to take property to
2	do?
3	MR. SCHULTE: Objection. Calls for a legal
4	conclusion.
5	MR. HADEN: I asked if he knows.
6	MR. SCHULTE: There have been a lot of
7	questions examining this witness who is not an attorney
8	about legal processes and contents of statutes and they
9	all call for a legal conclusion. He has testified he's
10	not an attorney and is not familiar with the text of
11	statutes.
12	JUDGE DIPPELL: What was your question again,
13	Mr. Haden?
14	MR. HADEN: Well, it was complicated, Judge.
15	It probably was a compound question to be fair. I think
16	the question was, does this witness know whether the
17	terms operate or repair are contained anywhere in
18	Missouri's taking statutes such that they could be
19	obtained for the Company in a takings action.
20	JUDGE DIPPELL: That is a bit specific and a
21	legal conclusion. So I will sustain the objection.
22	MR. HADEN: Judge, I've got a lot more
23	questions like that. So maybe that's where we're headed
24	for all of them. I guess I need to put them on the
25	record though just to have a record. I'm sorry. I'm



Page 629

- not trying to be obtrusive. We can fly through it. But if that is the Court's ruling, I'm just going to ask that question about a lot of these. So would you like me to put them in a blanket fashion and then get a blanket ruling?
 - obviously is familiar with the general process and that's part of his job is getting this Project through. So I expect him to be aware of the general principles. But whether or not the Company is following a specific legal strategy or an interpretation of the statutes, this witness is not going to be able to answer. So with that, you ask your questions and I'll rule on objections as they come up.

BY MR. HADEN:

- Q. Let me inquire then just to be certain. Judge Dippell has said it doesn't appear that you're going to know specific legal strategies or how to proceed on the statutes. Would you agree with that?
 - A. I would agree with that.
- Q. So is it -- To save time here, is it fair to say you don't know, you're not going to know whether specifically the Company is going to seek any of the terms in this agreement as it said here in the voluntary agreement when they go to court, if they have to go to



- court? I know it's an if. Assuming that they probably have to do it at least once. I'm not talking about the substance of an easement. Obviously that's what the action would be about. I'm talking about the specific terms contained within this easement.
 - A. I do not know.
 - Q. I do want to ask you specifically about subparagraph c in this or 2c in the document. That's going to be on the second page of that Schedule KC-4.
 - A. Sure.
- Q. That's for a telecom easement. Do you see that?
- 13 A. Yes.

2

3

4

5

6

7

8

9

10

11

12

14

15

16

17

18

19

20

21

2.2

23

24

- Q. Okay. So that reads the telecommunication easement. The easement may also be used for installation, operation, and maintenance of fiber optic cable and other equipment needed for the transmission of communications to or by third parties; is that correct? Did I read it right?
- A. Yes.
 - Q. First of all, do you know is this intended to be communication to or by third parties for the Company's sake in operating the electrical line?
- A. That's my general understanding.
- Q. Is it alternatively or also there to be able



- to sell access for telecom line to a third party?
 - A. I don't believe so.

2

3

4

5

6

7

8

9

10

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- Q. You don't think the Company has any plan to use that easement to sell access on to third-party telecommunication providers?
 - A. I don't believe so. Yeah.
- Q. Okay. Well, going back up in the transmission easement, it's kind of a similar question, 2.b. The last sentence in 2.b, so it's actually the top of page 2. Do you see that?
- 11 A. The top of page 2.
 - Q. Yeah, it's the last sentence, kind of the half paragraph at the top of page 2.
 - A. Sure. It says the Easement may be used for the transmission of electrical energy and for communication purposes, whether existing now or in the future in order to facilitate the delivery of electrical energy. I mean, that one seems to constrain the communication purposes to electrical energy only, correct?
 - A. Sure.
 - Q. But you don't know -- or you don't know or you do know whether the telecom easement -- let me make sure I'm hearing you right. Your belief today is not -- is that the telecom easement is not there to facilitate



- selling access to the actual physical easement to a third party; is that correct?
 - A. I am not aware of any specific plans to do so.
 - Q. Do you know of any affirmative decision that the Company definitely wouldn't do that?
- A. No, I'm not typically involved in those commercial discussions.
- MR. HADEN: Just one moment, Judge. I'm looking at this exhibit here seeing what I can move past given the ruling.
- 11 BY MR. HADEN:

2

3

4

5

6

7

8

9

- Q. Judge, to make a record, I would ask, if you look at paragraph 2.b, the very beginning where it says Transmission Easement. Do you see that? It's the very bottom of page 1.
- 16 A. Yes.
- Q. It says the Easement includes rights to
 develop, permit, construct, reconstruct, repair,
 improve, alter, replace, operate, use, inspect. Do you
 see that language?
- 21 A. Yes.
- Q. And to finish the phrase, maintain and remove a transmission line?
- 24 A. Yes.
- 25 Q. As to the words develop, permit, repair,



Page 633

1	improve, alter, replace, operate, use, inspect, do you
2	know whether the Company intends to seek an easement
3	if they have to move to condemnation action to seek an
4	easement there that includes all of those words as part
5	of a coerce or a court-condemned easement?
6	MR. SCHULTE: I object based on grounds
7	already stated.
8	MR. HADEN: I'm shocked at Mr. Schulte.
9	Judge, we've argued about, I think, the substance of
10	this already.
11	JUDGE DIPPELL: Then the ruling stands.
12	MR. SCHULTE: Sorry. Which? So we sustained
13	an objection regarding questions about the statute. So
14	I'm a little confused on whether my objection on that
15	question was sustained or overruled.
16	JUDGE DIPPELL: I'm sorry. Your objection
17	was?
18	MR. SCHULTE: The question was whether these
19	terms are going to be used, I believe, if whether these
20	terms are going used in a condemnation proceeding.
21	MR. HADEN: Would the Company seek an easement
22	in a condemnation proceeding that uses those same words.
23	That is the question.
24	JUDGE DIPPELL: And I will sustain that
25	objection.



1 MR. HADEN: Thank yo

2 BY MR. HADEN:

3

4

5

6

10

11

12

13

14

15

16

17

18

19

20

2.2

23

24

25

- Q. I did have a couple questions about your surrebuttal testimony. If you could pull that out for me.
 - A. I'm there.
- Q. Okay. Thank you. Give me just one moment.

 I've got to scroll down to what I was looking at.

9 MR. SCHULTE: Could you state the page number?

MR. HADEN: I will, yeah, when I find it.

BY MR. HADEN:

- Q. Starting on page 15. And really more 16. So in your surrebuttal testimony there on page 16 starting at line 13, do you see there was a question posed to you that says on page 6 of Mr. Hawkins rebuttal testimony, he disapproves of Grain Belt Express' ability to use eminent domain authority because Grain Belt Express is a "private enterprise" and claims, among other things, that "landowners are forced to sell their land," and how do you respond? Do you see that question?
- 21 A. I do.
 - Q. Okay. You responded then at line 17. Your answer starts to begin, Mr. Hawkins does not describe what he means by "private enterprise." If "private enterprise" means a "for-profit entity," then his point



- is illogical and unfounded because the largest public utilities in the state are for-profit--Evergy and
- 3 | Ameren. Do you see that?
 - A. Yes.

5

6

7

- Q. Do you recognize any distinction between

 Evergy and Ameren and what they do versus what Invenergy
 is doing in this Project?
 - A. No.
- 9 So as a starting point -- Well, let's read the Ο. 10 I'll come back around. I think we can cover next one. 11 both these first. Paragraph 20, your answer continued, 12 if "private enterprise" means "privately-owned" (i.e., 13 not publicly traded), then his point is also illogical 14 and unfounded because that circumstance is permitted by 15 Missouri law and the Commission has previously issued 16 CCNs to privately-owned companies. In any event, the 17 manner in which a company decides to raise equity--through private ownership or publicly-traded 18 19 stock--is not a basis for determining whether such company qualifies to be a public utility in Missouri. 20 21 Now I'll stop reading for the record.
- Question then is, you would recognize Ameren
- is a publicly-traded company, correct?
- 24 A. Yes.
- Q. Is Evergy publicly-traded?



- A. I believe so but I'm not certain.
 - Q. Invenergy is not publicly-traded, correct?
 - A. That is correct.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

- Q. From what I've seen of public disclosures, the majority owner for Invenergy is a government fund in Quebec; is that correct?
- A. I am not intimately familiar with Invenergy's ownership structure.
- Q. Do you know, because I don't think it was in your testimony where, for you, how many employees

 Invenergy or Grain Belt as an LLC will maintain in

 Missouri after construction of this Project?
- A. I don't believe any specific plans have been made yet. So I don't know how many employees will remain in Missouri.
- Q. You don't have any ballpark? It could be one or it could be a million, you don't know?
- A. So there will be a number of employees at the converter station site in Monroe County and then

 Invenergy will -- Grain Belt will also have a number of either employees who are contractors involved in maintenance along the line. It's impossible for me to say what that number is at this point.
- MR. HADEN: Okay.
- JUDGE DIPPELL: Mr. Haden, I'm going to have

1	to interrupt you there. We're going to have to take a
2	break so that Mr. Lamons can be elsewhere and the
3	Commission can attend their regularly scheduled meeting.
4	So we will reconvene at 10:30; or in the case that the
5	Commission's agenda is still taking place, we will
6	reconvene immediately after it adjourns. So for now we
7	can go off the record.
8	(A recess was taken for weekly agenda.)
9	JUDGE DIPPELL: Okay. I think we can go ahead
10	and go back on the record. So we're back on the record
11	after a more extended break than I had expected. But
12	the Commission's agenda has adjourned and the
13	Commissioners will be joining us shortly if they're not
14	already back online. It looks like some of them are
15	already back online. So we were in the middle of or
16	hopefully toward the end of Mr. Haden's
17	cross-examination.
18	MR. HADEN: No pressure.
19	JUDGE DIPPELL: We'll just go ahead and resume
20	where we left off.
21	WITNESS KEVIN CHANDLER RESUMED THE STAND.
22	CONTINUED CROSS-EXAMINATION
23	BY MR. HADEN:
24	Q. I know about where we left off. If I ask
25	something that's been asked and answered, I apologize.



- I think it will be quick. We were talking about Evergy and Ameren as private entities and relative to Grain Belt.
 - A. Sorry. Could you refer to where that is?
- Q. Yeah, we had left off, we were looking at the bottom of page 16 and the top of 17 in your surrebuttal. I don't know. I'm sorry. I don't know what tab it is in your notebook.
- A. I have a table of contents that's helpful. Okay.
- Q. Okay. All right. So I just wanted to make sure I understand. You said Mr. Hawkins testimony is illogical and unfounded because the largest public utilities in the state are for profit. Ameren at least though, I think you said, is publicly traded, correct?
 - A. I believe so, yes.
- Q. And so in theory anybody could buy a share of their stock and then at least have shareholder rights in the Company to ensure shareholders have rights, correct?
 - A. Correct.
 - Q. That is not true of Invenergy, correct?
- 22 A. Correct.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

23

24

- Q. I mean, it's held as a completely private corporation that's not even publicly traded, right?
- A. That's my understanding.



	' ·
1	Page Q. Okay. And as far as being a private
2	enterprise, it also is not, Invenergy I mean and Grain
3	Belt, they're not government owned. They're not owned
4	by the public at all in the sense the government owns
5	any part of them, correct?
6	A. I think I've stated before that I'm not
7	intimately familiar with the ownership structure, but

- Q. Okay. And you also don't have -- Invenergy and Grain Belt are not owned in any sort of co-op structure with any state within the U.S. as far as you know; is that right?
 - A. That is right.

that's my understanding.

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

25

Q. Okay. And so would you agree then that there are differences between Invenergy and Ameren and Evergy, on the other hand, as far as their ownership structure and public accountability?

MR. SCHULTE: Objection. That last statement about public accountability assumes facts not in evidence. It's argumentative.

MR. HADEN: Judge, I'm looking at his surrebuttal testimony. He's saying that another witness has made statements that were illogical and unfounded and given becauses, and I'm trying to get to the bottom of those becauses to cross-examination in the other

Page 640

- direction. He discusses in there issues about, in two
 different questions, about the notion of privately owned
 versus and publicly traded, et cetera, those issues and
 also the issue about whether or not this is a private
 development versus something serving the public.
 - MR. SCHULTE: That's a good explanation of what the cross-examination has been about, but it doesn't explain the use of the term public accountability.
- MR. HADEN: I don't think it's a confusing term. So I'm not sure what the -- I guess I don't really understand the legal basis of the objection.
- JUDGE DIPPELL: I'll overrule the objection.

 You can answer. And you can clarify.
- MR. SCHULTE: I'll try to clarify.
- 16 BY MR. HADEN:

6

7

8

- Q. Ameren can at least be held accountable by
 shareholders who own publicly-traded shares of Ameren as
 shareholders, correct?
- 20 MR. SCHULTE: Objection. Calls for a legal conclusion.
- 22 MR. HADEN: If he knows.
- JUDGE DIPPELL: I believe that does call for a
- 24 | legal conclusion. I'll sustain that.
- 25 BY MR. HADEN:



Q. Okay. When you talk about in your now I'm
looking at line 17 through 21 at the bottom of page 16
listed at line 20. You say if private enterprise means
privately owned, i.e., not publicly traded, this point
is also illogical and unfounded. Do you see that?

A. I do.

1

2

3

4

5

6

7

8

9

10

12

13

14

15

16

17

18

19

20

21

2.2

Q. Okay. And so I understand the point you're making in your testimony, but publicly-traded companies, if you know, can they be held accountable by their shareholders?

MR. SCHULTE: Same objection.

JUDGE DIPPELL: I will overrule the general -I mean, the objection for the general question that the
witness does testify about what companies are for profit
and private enterprise in his surrebuttal.

THE WITNESS: So I think the point that this is trying to make is to the extent that we are also regulated by the Missouri Public Service Commission as a utility in the same way that other utilities are regulated, then yes, I don't believe there's a distinction.

- BY MR. HADEN:
- Q. As to the regulation?
- A. As to the regulation, correct.
- 25 Q. But there is a difference in corporate



governance,	correct?

2.2

MR. SCHULTE: Objection. This witness has testified that he is not an attorney and he is not a witness to testify about corporate governance.

MR. HADEN: Judge, if that really is the objection, then I guess I would move to strike lines 20 through 4 -- 20 on page 16 through line 4 of 17, because I think what the Company is representing is he's not competent to testify to the very things he's testified to here. I'm not saying that, by the way. That's their objection.

JUDGE DIPPELL: I'll again overrule the objection. If you want to make a motion to strike, then set that out.

MR. HADEN: With an overruled motion, I understand, Judge.

17 BY MR. HADEN:

- Q. So the question was, there is a difference in corporate governance between a publicly-traded company and Invenergy, correct, if you know?
- A. Yeah, I am not an expert in corporate governance and can't speak to that. Again, what I think we can speak to is the fact that we are regulated by the Missouri Public Service Commission as a utility, as well as the fact that as is stated in his testimony the

1 Commission has previously issued CCNs to privately-owned 2 companies. 3 MR. HADEN: One moment, if I could, Judge. Judge, I think that's all I had for now obviously 4 5 subject to recross some questions. Thank you. 6 Thank you. JUDGE DIPPELL: Mr. Agathen, you 7 mentioned to me on the break that you had something you'd like to interject. 8 9 MR. AGATHEN: Yes, thank you, Judge. I'd like 10 to correct a misstatement that I had made during 11 cross-examination of Mr. Chandler. I represented to him 12 that counsel for Grain Belt in his opening statement 13 Mr. Schulte said that many landowners would benefit from 14 the compensation package being offered. In fact, that 15 statement came from their position statement. I believe 16 Mr. Schulte is correct that in his opening statement he 17 said that the vast majority would benefit from the 18 package. 19 Thank you for that correction. JUDGE DIPPELL: 20 All right then. Is there anything from Mr. Hollander 21 today? 22 MR. HOLLANDER: No, thank you, Your Honor. 23 JUDGE DIPPELL: Ms. Stemme. 24 MS. STEMME: No questions. 25 JUDGE DIPPELL: Associated Industries.

1	MR. ELLINGER: No questions, Judge. Thank
2	you.
3	JUDGE DIPPELL: Are there Commission questions
4	for Mr. Chandler?
5	CHAIRMAN RUPP: Yes.
6	COMMISSIONER HOLSMAN: Go ahead.
7	CHAIRMAN RUPP: I'll go ahead and defer to
8	Commissioner Holsman. I know he has a list.
9	JUDGE DIPPELL: All right.
10	COMMISSIONER HOLSMAN: Thank you. I do have a
11	rather lengthy list of questions. So I just want to
12	prepare you for that.
13	THE WITNESS: No problem.
14	QUESTIONS
15	BY COMMISSIONER HOLSMAN:
16	Q. And some of the questions that I have are
17	probably going to meander into the direction of the
18	previous list of questions. So I understand if you
19	can't answer them. I understand but I'd like to ask
20	them anyways to try to get better clarity on this.
21	A. Yes, sir.
22	Q. Can you confirm the number of Missouri
23	landowners and the number of parcels involved in Phase



In Phase I in Missouri or throughout Phase I

25

Α.

for the entire Project?

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

19

20

21

2.2

23

24

- Q. Well, the number of landowners in Phase I for the Project would only be the ones who live in Missouri.
- A. I wasn't sure if you were including Kansas as well. The number of parcels I believe is in the realm of 578 for Phase I in Missouri. It can be difficult to calculate the number of unique landowners given title questions and things like that and some landowners own land themselves and some in the name of a business. So we typically talk in parcels.
- Q. Okay. And earlier testimony provided that 87 percent of them were under some form of agreement?
 - A. Approximately.
 - Q. And how many did you say? 578? What was that number?
 - A. I believe it's about 578.
- Q. You've got 87 percent. How many do you anticipate being in Phase II?
 - A. I do not know off the top of my head. I don't know off the top of my head.
 - MR. SCHULTE: I just want to make a clarification for the record. I don't want there to be confusion in the record. And I think that if I understood Mr. Holsman's question right, your questions -- have all of your questions thus far been limited to

	ranscript of Proceedings	June 07, 202
1	Missouri?	Page 646
2	COMMISSIONER HOLSMAN: Yes.	
3	MR. SCHULTE: I think the 87 percent nu	ımber,
4	and I'll let the witness verify that, I think we	need to
5	clarify.	
6	THE WITNESS: That's correct.	
7	BY COMMISSIONER HOLSMAN:	
8	Q. So 87 percent includes all of Phase I,	not
9	just in Missouri?	
10	A. That's right. For Phase I in Missouri,	we are
11	in the just north of 70 percent.	
12	Q. 70 percent?	
13	A. Yes, sir.	
14	Q. Okay. And then in Phase II, for just M	Iissouri
15	residents how many do you anticipate? Is that a	
16	knowable number?	
17	A. It is a knowable number. It's not a nu	ımber
18	that I know off the top of my head at this moment	
19	0. Do you have a percentage of what that r	umber

that's not known would be of what you have currently under agreement?

20

- 22 I believe that number for Phase II Missouri is Α. 23 between 25 and 30 percent.
- 24 Okay. What would happen to the payments Q. 25 related to any voluntarily obtained agreements for Phase



- II if Phase II never occurs?
- A. So when we sign a voluntary easement

 agreement, the landowner is paid 20 percent up front.

 Within three years, an extension payment of 10 percent

 is due. And the balance payment must be paid within

 three years after that or the easement expires.
 - Q. Okay.

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- A. For any -- The easement does not expire for any easements on which the full balance payment has been made.
- Q. And do you know the date of when you would have received your first voluntary easement?
 - A. For Missouri?
- O. Yes.
 - A. I believe that Invenergy began land outreach in the second half of 2020, I believe, and there were a number of easements acquired by the previous owner of the Company prior to that.
 - Q. Okay. So if 2020 you got the first 20 percent up front, then 2023 would be the next 10 percent, three years they'd do the next 10 percent, and then the balance of it would have to be done by 2026, correct?
 - A. I believe so.
 - Q. If Phase II is not initiated by 2026, that 25 to 30 percent that you currently have voluntary



- Transcript of Proceedings Page 648 1 agreement with, what happens if Phase II doesn't happen 2 by the time, will they receive the balance by 2026 to 3 lock in that lease even if Phase II doesn't occur? 4 Α. Could you -- sorry. Could you rephrase the 5 question or restate it, please. 6 So the way I understand the time horizon and 0. 7 the math that we've got here, 25 to 30 percent of Phase 8 II Missourians are already currently under agreement? 9 Uh-huh. Α. 10 You've also stated that it's 20 percent up 11 front that they would receive for this voluntary 12 agreement. Then within the first three years they would
 - get an additional 10 percent. The balance of that would have to be paid within another three years. When that balance is paid, question one is, that easement is locked in, right?
 - Α. Correct.

14

15

16

17

18

19

20

21

2.2

23

24

- It's no longer revocable by either side? Q.
- That's my understanding. Α.
- What if Phase II is never constructed? O.
 - Α. What would happen to those easements?
 - Q. What would happen to those easements?
- Α. I don't know that I can speak to what the Company would or would not do in that scenario.
 - What would happen if the Company were to not Q.



- receive regulatory approval or for whatever reason

 decide not to build Phase II and you've already

 disbursed the 20 percent up front and hit the 10 percent

 three-year addition? What would happen to those funds

 in the event that Phase II was not built?
 - A. So any funds previously paid to landowners would not be clawed back.
 - O. Is that in the --

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- A. That is in the easement.
- Q. -- in the easement agreement that funds distributed will not be clawed back?
 - A. Yes, I believe so.
- Q. Okay. The proposal is seeking to make modifications to landowner compensation for the Tiger Connector AC line increasing the landowner compensation from 110 percent to 150 percent of fair market value eliminating the structure payments and maintaining the agricultural impact payments. Is that correct? So the Tiger -- let me say that again. So the Tiger Connector line will increase the landowner compensation from 110 percent to 150 percent and also eliminate the structure payments and maintain the agricultural impact payments?
 - A. That's accurate.
- Q. That's accurate. Can you explain if or how any landowners might be worse off in terms of



compensation under the proposed compensation modifications as compared to the landowners compensated under the HVDC line agreement?

- A. Yeah. As stated previously, it's unlikely that many, if any, landowners would be worse off. I guess there is a scenario where maybe hypothetically a landowner has a very small parcel let's say, you know, less than an acre or two and a structure would be placed on that property where perhaps they could have been better off with a structure payment. But in general that's an unlikely scenario I think from a design perspective.
- Q. So is there any scenario in which a landowner that is on the Tiger line would have benefit in an agreement that was established under the original line?
- A. I think in the scenario that I just mentioned that's hypothetically possible.
- Q. Okay. Now, this 20 percent, 10 percent balance due at the end of the I guess six years, what if a landowner were opting for an annual payment option? Is it different structure than that up-front payment? And when would those payments start if they opt for an annual payment?
- A. So the -- Sorry, I'm just trying to think to make sure I understand the question. But the annual



payment in terms of structure is in terms of how the
annual payment itself is structured, not structured in
terms of how it is structured, is the same as it is in
the standard form easement. It would just be based on
the 150 percent calculation, not the 110, and does start
in year one.

- Q. In year one of signing the agreement or year one of operation?
- A. The first payment I believe is paid at start of construction.
 - Q. At start of construction.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- A. Annually from there. It's escalated by 2 percent per year.
 - Q. How long do those annual payments go for?

 Are they in perpetuity of the line?
 - A. As long as the line is in operation.
 - Q. Do they run with the land? If a landowner sells that parcel, the payment remains in place with the land?
 - A. I am not an attorney; but as I understand, the easement does travel with the land.
 - Q. Okay. When are the agricultural impact payments made? What conditions trigger a payment to landowners? Are those payments available in perpetuity and if and when the appropriate conditions occur?



	Transcript of Proceedings June 07, 2
1	Page 6 A. So the agricultural impact payment is designe
2	to compensate landowners for observed damages during
3	construction and the payment is and so that is
4	designed to include compensation for the easement area
5	as well as anticipated damages as outlined I believe by
6	the agricultural inspector who is hired by the Project
7	as part of the landowner protocol. Those are paid up
8	front and it is a one-time payment that is designed
9	it's a one-time payment set at 300 percent of estimated
10	impact.
11	Q. Your direct testimony states that additional
12	payments will be made to compensate landowners for crop
13	damage, crop loss, field repair, damage to drainage
14	tiles, temporary or permanent impacts to center-pivot

irrigators or other similar impacts should they occur. My concern is the continued impact on landowners property post construction and how will the Company address damage caused by ongoing maintenance?

15

16

17

18

19

20

21

2.2

23

24

- So the Company will negotiate crop damage Α. payments with the landowner on a per incident basis.
- Do you have a sense of how frequently an 0. occurrence might be that the Company would cause crop damage and how you would potentially mitigate that?
- I can't speak myself to which like the Α. frequency of maintenance or damages would occur in



- operation. I would say that in general the Company would endeavor to minimize impact.
- Q. You testified earlier that you were at the hearing, the public hearings when we got testimony on this, correct?
 - A. Yes, sir.
- Q. Some of the testimony that was presented there I have interest in in terms of what happens after this line has been constructed and you have to have access to it.
- 11 A. Right.

2

3

4

5

6

7

8

9

10

21

- 12 Let me give you a hypothetical. Ο. Let's say 13 that one of your towers requires maintenance, it 14 requires a large vehicle to, you know, get to it and 15 you've had to drive across a commercially viable field 16 and you've done that damage. Does the easement give the 17 landowner a clear path to compensation or is this 18 something that they're going to have to hire an attorney 19 for and go through the legal process to get the Company 20 to make amends for the damage?
 - A. If you don't mind, I'm just going to pull the easement form up.
- Q. Sure. Is that the KC-4?
- A. If somebody could provide the number. Thank you.



1 Q. KC-4.

2.2

- A. Sorry. Can you rephrase the question, please?
- Q. What is the process by which a landowner will get a reconciliation payment or recompensation for damage done by the Company after the line is in operation?
- A. So they would work with a Grain Belt representative to identify the area of crop damages and determine. Working with the landowner Grain Belt will determine what that value is and damages will be paid.

 And it states in the -- It also states in Section 3 that landowner will be made whole for any damages or losses that occur as a result of non-routine maintenance or reconstruction as well.
- Q. When you were attending the hearings and listening to the landowners' concerns, what would you consider was their primary number one concern? What did you hear as the Company that they were most concerned about from that testimony?
- A. I think in general it's a new Project and so it does represent a change to landscape. I do know there were a lot of questions and concerns regarding potential impacts to agricultural operations.
- Q. One of those operations is pivot irrigation. We heard that the landowners were concerned that these



- towers would disrupt pivot irrigation, how were those concerns addressed. The connector route, the Tiger Connector route map included green circles to indicate the impacted pivot irrigation systems. Initially how many potential systems were at risk?
- A. I don't know specifically how many pivot systems were at risk. I know that during -- following the public hearings in the routing meetings a number of revisions were made to the potential route segments to avoid pivot irrigation impacts. And ultimately the route that was chosen was chosen because it does -- there are no center-pivot, identified center-pivot crossings on that route.
 - Q. So there are none on the new route?
 - A. We believe so, yes.

- Q. So you would suggest that you could quantify how many accommodations were made from the initial route to the preferred route?
- A. I can't actually quantify how many were avoided, but I can state that the route as far as we're aware avoids center-pivot crossings.
- Q. Can you describe how the landowners expressed desires to utilize existing right-of-ways, public easements or to co-locate with other existing transmission lines?



A. Certain landowner comments did express a desire to parallel certain existing linear infrastructure.

2.2

- Q. Were any modifications to the route made as a result of those requests?
- A. I think a number of specific references were made in the routing study itself. I cannot -- I cannot myself detail specific instances. I know that a number of revisions to potential routes were made.
- Q. Why is it not possible to utilize existing right-of-ways or easements? It would seem that if you were going to follow an existing road or you're going to tie into existing lines that, you know, were already there, why isn't the Company more aggressive about finding ways to have this route be less impactful?
- A. So it is true that in certain instances paralleling things like existing transmission lines can be seen as opportunities, but at the same time because many of those lines have been up for a while they tend to be -- there tends to be built infrastructure around them. Many times those existing lines are closer to homes or businesses or buildings. So it's not always ideal to parallel those areas because of their proximity to other features that we endeavor to avoid.
 - Q. What about scrub cover, marginal neglected

land rather than cropland or property with structures?
Was that a part of the assessment?

A. I believe so.

2.2

- Q. Several landowners shared concerns over the potential removal of what we might call intentional trees. Some made mention of avoiding lands that utilized USDA Conservation Reserve Program, the CRP funding to plant those trees. Others asked that their trees not be disturbed because of premature harvest would devastate their crops. Other landowners asked to avoid siting along their tree line because they have cultivated it for years. What modifications were made to address these direct requests by the landowners?
- A. Yeah. I believe the routing study may outline a number of instances where certain requests were made. In general, one of the reasons for selecting the route we did was to avoid tree clearing. It's my understanding that the route that we chose of the ones we evaluated will require the least amount of tree clearing.
- Q. Okay. I remember a gentleman who testified at the hearing that on his property he requested that you move the line some 50 feet, 50 or 100 feet for whatever reasoning that he had for his property that that made more sense and he was told that that wasn't going to be

possible. Do you have an opportunity in place to communicate directly with the landowners on the line through their property if and when something like a simple 50-foot move might make sense and doesn't detur or adversely affect the route of the line?

2.2

- A. Yes. So in the landowner negotiation process, we do begin conversations on micrositing adjustments to the line, and an important part of making those micrositing adjustments is where feasible from an engineering and safety standpoint we will try to acquiesce to landowner requests.
- Q. Is that something that's only provided in a voluntary scenario?
- A. I think I stated before I'm not incredibly familiar with the end stage of the condemnation process, but I do believe that we in general want to -- if possible we would do that. But again, I'm not specifically familiar with any particular condemnation adjustments that have been made.
- Q. I tried to ask this question yesterday and was directed to inquire of you instead. Several farmers that utilize organic farming practices raised concerns that they would lose or potentially lose their USDA organic certification if the structure and wires were constructed on or over their land. Are you familiar



- with what is required to receive that certification and whether the installation of an HVDC line would cause those farmers to lose organic certification?
- A. Yes. In answer to that question, I would point towards the agricultural impact mitigation protocol.
 - Q. Page 10, provision 18?

2.2

- A. That is correct. So this section of the mitigation protocol details how Grain Belt will work with landowners to minimize impact to organic farm production methods.
- Q. Have you identified how many of those landowners might require that mitigation?
- A. To my knowledge, we have not quantified them at this time. The letters, we will send letters to landowners and tenants prior to construction inquiring about the presence of those farm production methods. I don't believe those letters have been sent yet.
- Q. I want to return to crop compensation for just a second. In paragraph 3 it states that Grain Belt will repair or pay at Grain Belt's option landowner or its tenants for any damage to improvements, livestock, crops, et cetera. The term at Grain Belt's option from, I know you're not a lawyer, but from a legal perspective, you know, we've all had our fair share of



- 1 experiences and hassles dealing with warranty claims and 2 product rebates. When I read the provision at Grain 3 Belt's option, I have to wonder what assurances the 4 landowners have that that provision isn't a "you must 5 sue me to have me compensate you for that, " and I want 6 to hear from the Company of their interpretation of what 7 at Grain Belt's option means when it comes to these 8 easement agreements.
 - A. I'm having a hard time finding that particular line. Could you direct me to that again? Sorry.
 - Q. Let's see. It's going to be in the KC-4.
 - A. Yeah.

10

11

12

13

14

15

16

17

18

19

20

- Q. Subsection 3, top of page 3 under crop compensation. Grain Belt will repay or repair at Grain Belt's option landowner or tenants.
- A. Thank you for that clarification. I was looking too deep in the paragraph. So again not being an attorney, my interpretation of that is that it's not Grain Belt's option whether or not to make the landowner whole. It is whether to repair or pay for the damages, not whether any recompense occurs.
- Q. And again, this is if it's a voluntary easement, correct?
- 24 A. That is correct.
- 25 Q. So I know your counsel doesn't feel like we



- have the authority to go into the condemnation section of the statute to discuss as a public interest. But I would ask this question. Do any of these protections in this easement agreement get transferred to a property that is eminent domain?
 - A. My assumption is yes. I cannot imagine that Grain Belt would want to treat landowners differently in the operations period whether or not they were condemned or signed voluntary agreements.
 - Q. As far as the annual payments go, you said it's a 2 percent escalator each year?
 - A. Yes, sir.

2.2

- Q. Is that in perpetuity for as long as the transmission line is in operation?
 - A. Yes, I believe so.
- Q. And I know you cannot predict the future, but what do these landowners -- what is the Company's response to these landowners who are concerned that in the event that your Company was to become insolvent and no longer operate this transmission line and these agreements would potentially be forfeited and they have these structures on their property, what is the Company's response to that concern?
 - A. So in the Missouri landowner protocol, which governs certain actions of the Company, there is a



section, Section 8, about the establishment of a
decommissioning fund to handle the activities of
dismantling, demolishing and removing all equipment
facilities and structures, terminating easements and
following the release of such easements and secure and
maintaining and disposing of debris with respect to the
Project facilities and performing any activities
necessary to comply with applicable laws, contractual
obligations that are otherwise prudent to retire the
Project facilities. That's kind of an abbreviation, but
that is the sense of what that part of the protocol
outlines.

- Q. Where would the funds come to execute that?
- A. Sorry. What was the question?
- O. Would there be funds to execute that?
- A. Correct. So at the commencement of construction of the Project, Grain Belt shall establish a decommissioning fund in an amount reasonably necessary to perform the wind-up activities described.
- Q. Who would determine what's reasonable amount?

 JUDGE DIPPELL: We have some kind of static or something. I'm not sure. Yesterday it was the air-conditioning unit.
- 24 BY COMMISSIONER HOLSMAN:

2.2

Q. Let me ask another question. I'm interested



2.2

- to hear who decides what's reasonable. Do you have a suggestion of what would be reasonable, what that fund would require to have in it to successfully mitigate the construction of this line?
- A. Yeah. So I do not specifically know who determines what amount is reasonable. I would note that in the section describing the decommissioning fund it does describe that the fund shall be increased as construction of the Project progresses sufficient to cover wind-up activities for Project facilities that have been constructed and installed. So I think you can take that to read that the funding would be sufficient to cover those activities.
 - Q. Is there any contemplation if the Company were to sell this line?
 - A. So it's my understanding that all the landowner protocol and the agricultural protocol govern the Project irregardless of who owns the entity. I think that in the event of such an occurrence these would still govern the Project.
- Q. This is my last series of questions. Does the Company have a preference in a voluntary lease easement that is either an up-front payment or a perpetuity payment? Do you suggest one or the other to the landowner as one being more beneficial than the other?

- A. No, we do not. That's a personal decision the landowner makes.
- Q. Do you present the math of what they could potentially expect if they chose one or the other?

2.2

- A. Whether that math is like specifically presented, the concept of both is explained in depth to the landowner. Generally it's a question of whether the landowner values the up-front payment for whatever reason in terms of having that set amount at the time or whether they value recurring revenue from the Project, and that's where it comes into a personal decision about what's important to the landowners themselves.
- Q. If the landowner has made a decision and then have decided that another direction would be in their interest, do they have the ability to refund and change? Is there any provision that allows them to change their mind?
 - A. I do not know the answer to that question.
- Q. Okay. You say that you've got 87 percent of Phase I under voluntary agreement. 70 percent of that is in the state of Missouri. That leaves 30 percent in Phase I for you to continue to negotiate with. Do you have a time frame for when you think that 30 percent would potentially be in voluntary agreement or do you have a time frame in which you believe negotiations will

cease and then you will start condemnation process?

- A. No, not myself. As stated before, the decision on whether or not to enter into condemnation is really a result of whether a landowner is willing to negotiate or whether negotiations are at an impasse and no longer viable. It's not necessarily a time perspective.
- Q. But there is a clock ticking because you have to have the -- anybody who joined voluntarily has six years before the balance is paid, and I would think that the overall time horizon on the Project probably has some sort of financing clock associated with it as well. So the Company must know how long they have to continue voluntary negotiations before it has to switch over.
- A. I would just state we're in late-stage negotiations with a large group of the remaining 30 percent. But ultimately we are committed to voluntary negotiations in order to be productive.
- Q. Do you have a target or a forecast of what percentage you will land on that are voluntary?
 - A. I do not.

2.2

Q. Okay. My last question is, we heard from some of the landowners in these hearings that they felt that there was a little bit of, and I want to choose my words carefully here to try to reflect their sentiment, there

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Page 666

was a little bit of predetermined coercion in the presentation of the lease agreements. I want to give the Company an opportunity that you didn't get in the hearing to address rather any of your negotiation tactics were intentional or unintentionally part of any type of it's already concluded so you might as well go ahead and sign up because this is going to happen and if you don't sign up now, then you'll regret it later, because that's what we heard in the hearing.

Α. I would say that's not how Grain Belt landowner, or excuse me, Grain Belt land agents communicate to landowners. In general, we understand that there is an impact and potential inconvenience associated with landowners, associated with the Project to landowners, but at the same time the intention of offering 150 percent or in the case of the HVDC route, the 110 percent plus structure payments, it's my understanding that is significantly higher than what landowners may receive from another transmission So we try to recognize that through a fair company. compensation package through the advanced crop damage payment which is my understanding is generally more generous than what landowners would receive from other transmission companies and through things like the option for annual payments. And I think at the end of



1	the day by being governed by the landowner protocols, by
2	the agricultural impact mitigation protocol and the code
3	of conduct, Grain Belt is held to I think what most
4	would see as a very high standard in terms of landowner
5	outreach and communications. And that's I'll stop
6	there.
7	Q. Do you think the Commission has the authority
8	to determine what is just and reasonable in that
9	decommissioning fund for the CCN to proceed?
10	A. I think that is beyond my legal expertise.
11	COMMISSIONER HOLSMAN: Thank you, Judge.
12	JUDGE DIPPELL: Thank you. Mr. Chairman, you
13	had some additional questions?
14	CHAIRMAN RUPP: Thank you, Judge. I have a
15	follow up on a couple of Commissioner Holsman's
16	questions just to clarify.
17	QUESTIONS
18	BY CHAIRMAN RUPP:
19	Q. Just to clarify to make sure I heard you
20	correctly, the 2 percent increase each year you said was
21	in perpetuity?
22	A. Yes, sir.
23	Q. There is no cap?
24	A. No, sir.

Regarding the agriculture impact payments, you

25

Q.

- stated that was during construction. And then later it was you were discussing it about maintenance and I believe I heard you say it would be the agriculture impact payment would be available for non-routine maintenance. Does that exclude any damages to agriculture on routine maintenance?
 - A. It does not.

2.2

- Q. It does not. So routine maintenance, non-routine maintenance, the agriculture impact is still applicable?
- A. That's right. I would point to in the crop compensation section the statement of whether such damage occurs before, during or after construction. I would interpret that as crop damages for routine maintenance as well as non-routine maintenance.
- Q. I thought I heard you say non-routine. I wanted to make sure there was not an exclusion. A bit of confusion in my mind on the conversation I believe you were having with the counsel from the Agricultural Association. I believe in that conversation we were talking about the 150 percent payments of the value that was 20 percent up front and then the balance is then lump sum or annual. The annual is 5 percent year one, then 2 percent each year. But I thought I heard in the conversation with Commissioner Holsman that it was 20



percent up front when signed, then 10 percent within three years and then balance paid in another three years.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

- Yeah, thank you for the opportunity to clarify Α. that. So there's a 20 percent up-front payment to After that, Grain Belt could pay the full landowners. 80 percent balance, but there's also a provision for a 10 percent second payment which in effect that 10 percent payment would be due within three years and that basically extends the easement. And so three years after that we would have to pay the remaining 70 So that was probably a little unclear. percent. Grain Belt could pay the full 80 percent. The most likely scenario, to be candid, is probably paying the 10 percent and the 70 percent as the full balance payment.
- Q. So this would be for those that chose not to do the annuitized perpetual payment. This is just applying to those that wanted the up-front payment?
- A. Right. And to clarify the exchange earlier, the 5 percent payment would be -- the initial 5 percent payment would be either of the 70 percent or 80 percent if Grain Belt made the full balance payment up front and then escalated 2 percent per year from there on out.
- Q. So the 5 percent comes into play if the landowner has taken the payments in perpetuity as long



- as the Project?
- 2 A. Right.

- Q. The 10 percent within three years is for the lump sum option?
- A. I believe that's for all landowners. All landowners would receive the 10 percent as the second payment to extend, essentially extend the lease option, or excuse me, the easement option.
 - Q. I'm confused where the 5 percent.
- A. The 5 percent is the first annual payment that is paid to landowners and that is 5 percent of that balance payment. And then from there that 5 percent is escalated by 2 percent every year.
- Q. That runs different among numbers in my head.

 20 percent up-front payment using the counsel's \$100,000 example. So twenty grand up front, there you go. Year one they get another \$4,000 which would be 5 percent of the 80,000 balance, correct?
- A. If we're -- I was starting to do math, which is a bad idea for me. Using the \$100,000 example, the landowner would receive \$20,000 at signing, \$10,000 three years later and then either \$70,000 as a lump sum balance or 5 percent of \$70,000 for their first annual payment.
 - Q. And that annual payment of \$5,000 would



1 increase by 2 percent each year? 2 That is correct. Α. 3 Ο. So 2 percent increases in that example is on 4 the 5,000? I'm sorry? 5 THE STENOGRAPHER: 6 MR. PRINGLE: If I may, we do still have our 7 little fun rate calculator up there if that would help 8 the witness. 9 JUDGE DIPPELL: I also think that those 10 missing attachments to the easement contract may have 11 some of these calculations on it, if I'm correct? 12 THE WITNESS: You are correct. 13 JUDGE DIPPELL: I think the Commission is 14 going to need those. 15 MR. SCHULTE: We do have those. Would you 16 like me to -- I was waiting for redirect but we can 17 enter those now, if that's more appropriate. 18 JUDGE DIPPELL: Did you say you have copies? 19 MR. SCHULTE: I do. 20 JUDGE DIPPELL: I think that would be a good 21 thing. 2.2 MR. SCHULTE: For the record, there are two 23 sets. Before I give them away, I want to make sure I 24 explain them. There will be two exhibits. Exhibit 24,

if I have my numbers right --

JUDGE DIPPELL: Yes.

2.2

MR. SCHULTE: -- Exhibit 24 includes Exhibit C easement calculation sheet and Exhibit D structure estimate and advanced crop compensation calculation in a standard form example for the HVDC landowners. That's Exhibit 24.

And Exhibit 25 includes Exhibit C easement calculation sheet and Exhibit D advanced crop compensation calculation in a standard form example for the Tiger Connector landowners assuming that the 150 percent fair market value payment structure is approved. That's Exhibit 25.

JUDGE DIPPELL: Thank you. Would there be any -- well, you guys haven't seen them yet. I was going to ask if there would be any objection to the Commission receiving those attachments into evidence. I'm seeing none. The Commission will enter those into evidence.

(COMPANY EXHIBITS 24 AND 25 WERE RECEIVED INTO EVIDENCE AND MADE A PART OF THIS RECORD.)

JUDGE DIPPELL: Copies are being circulated.

MR. SCHULTE: As these are being distributed, they're not premarked, my apologies, but the easy way to tell the difference is Exhibit 24 has a landowner name Jane Doe at the top and Exhibit 25 has brackets for the landowner name.



1	JUDGE DIPPELL: Thank you for that
2	clarification. Mr. Chairman, whenever you've had a
3	chance to look at that and you're ready, just go ahead
4	and continue.
5	CHAIRMAN RUPP: I'll review this a little more
6	in depth.
7	JUDGE DIPPELL: Did the witness receive a copy
8	of that too?
9	THE WITNESS: I do. Thank goodness.
10	BY CHAIRMAN RUPP:
11	Q. Again I'm going to go back. I need to
12	understand this conceptually before I can
13	A. Sure.
14	Q. So in the \$100,000 example, the 20 percent up
15	front, there's \$20,000 payment. The next payment is 5
16	percent that is due in year one and the 5 percent is on
17	the remaining balance of the 80,000 that is owed?
18	A. So if you are looking at Exhibit C, the
19	easement calculation sheet.
20	MR. SCHULTE: I'm sorry. Could we pause.
21	We're having a distribution issue.
22	JUDGE DIPPELL: I'm sorry. I jumped the gun
23	there trying to get things going.
24	MR. SCHULTE: Okay. I think we're clear.
25	Thank you.



	Transcript of Proceedings June 07, 202
1	Page 674 JUDGE DIPPELL: Thank you.
2	BY CHAIRMAN RUPP:
3	Q. So I do read that it says 10 percent of the
4	total easement consideration in the second payment?
5	A. Correct.
6	Q. So that would be 5 percent off the 100,000,
7	correct, if we're using the 100,000 initial?
8	A. 10 percent of total easement consideration
9	would be \$10,000.
10	Q. Okay. Yes. So 10 percent. So where did this
11	5 percent number come up at the end of the first year?
12	A. If you look in line 4 of the schedule for
13	payment of total easement consideration, it specifies 5
14	percent, and so that would be 5 percent in this
15	situation of \$100,000, 5 percent of 70,000, which this
16	calculator tells me is \$3,500, and it would escalated by
17	2 percent annually from there.
18	Q. So it would be \$3,500 for year two. Then it
19	would be \$3,500 plus 2 percent the next year, whatever
20	that number was plus 2 percent into perpetuity?
21	A. Yes, sir.
22	Q. Okay. In your exhibits these examples, on
23	Exhibit 24, the one with Jane Doe you have a total



Is that a

representation of the average or is that an arbitrary

easement consideration of \$34,958.

24

1	Page 675 number and the third question what is the average that
2	you have been
3	A. So that's an arbitrary number. I would say
4	that that is significantly below average of what we're
5	seeing currently. For Tiger Connector counties, I would
6	anticipate cropland based on what we've observed and
7	what has been communicated in initial outreach to
8	landowners, in general cropland is north of \$10,000 per
9	acre.
10	Q. The only other unclear thing I have in my head
11	is, and I think you answered it, but I just need you to
12	repeat your answer. If condemnation proceedings are
13	gone through with and the land has been taken via
14	eminent domain, will the 150 percent of value be applied
15	to that valuation or the larger of the two?
16	A. I cannot say at this time what the
17	condemnation compensation will look like for Tiger
18	Connector counties.
19	CHAIRMAN RUPP: Judge, that completes all the
20	clarification questions I have. Thank you.
21	JUDGE DIPPELL: Commissioner Hahn.
22	COMMISSIONER HAHN: Thank you, Judge.
23	QUESTIONS
24	BY COMMISSIONER HAHN:

To go back to the easements briefly, you had Q.

- stated that 578 landowners are in Phase I that are Missouri landowners and about 366 of those easements have been obtained. Can you say how many of those easements have been voluntarily obtained?
- A. So bear in mind without having the numbers directly in front of me, I think I believe the number of voluntary easements acquired for Phase I is 369 easements, 369 easements voluntarily acquired for Phase I in Missouri, again, I believe without having the numbers directly in front of me.
- Q. Can you say how many easements in Missouri have been acquired that have been involuntary?
- A. Yes. We have filed 19 condemnation cases in Missouri. Of those I believe six have been -- have concluded via negotiated settlement and I believe four have been acquired through the legal process.
- JUDGE DIPPELL: Excuse me. Can I ask the gentleman with the camera to turn the light off. Thank you. I apologize.
- THE WITNESS: No problem.
- 21 BY COMMISSIONER HAHN:

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

2.2

23

24

- Q. I'm sorry. I caught that 19 proceedings have been filed, 6 have concluded by settlement and 4 could you restate the end?
- A. I believe 4 easements have been acquired



through the court process.

2.2

- Q. Thank you. And to go back to the Ag
 Associations line of questioning with regard to KC-4,
 Section c on Telecommunications Easement. Does Grain
 Belt anticipate installing fiber optic cable during
 construction of the transmission line or at a later
 time?
- A. So this is I think probably worth clarifying what was said previously about telecommunications easement. So I believe looking at c, that could be interpreted as including third-party fiber optic communication. The Company I'm aware in the past has discussed the possibility of installing fiber for rural broadband on the line. This telecommunication easement language is not in involuntary easements. For the installation of easements -- excuse me. For installation of communications, there is communication cables that are necessary for the operation of the line and I believe Aaron White noted that in his testimony and those would be presumably installed at construction.
- Q. Does Invenergy or Grain Belt, do you have any plans to -- I know you've mentioned or Invenergy has mentioned previously in testimony there's not any intentions to sell immediately the fiber. Is there any intention to lease the fiber?

Page 678

1	A. I am not aware of any intention to lease the
2	fiber.
3	COMMISSIONER HAHN: That concludes my
4	questions. Thank you.
5	JUDGE DIPPELL: Thank you. Are there any
6	other Commissioner questions? Okay. I think I may have
7	a couple more questions, but I want to take an
8	opportunity to look through my list and remove the ones
9	that you've already been asked. So I think this is a
10	good point to go ahead and break for lunch. I know we
11	haven't been going a super long time, but this seems to
12	be a convenient breaking point. So we'll go ahead and
13	break for lunch and return at 1:30. We can go ahead and
14	go off the record.
15	(The noon recess was taken.)
16	JUDGE DIPPELL: Okay. Let's go ahead and go
17	back on the record. Mr. Chandler, welcome again.
18	THE WITNESS: Thank you.
19	JUDGE DIPPELL: I have a few more questions.
20	I'm going to try to fill in some blanks and hopefully it
21	won't be too difficult.
22	QUESTIONS
23	BY JUDGE DIPPELL:
24	Q. So back on your Schedule KC-4, the easement,
25	looking at Section 2, again the optic cable installation



- telecommunications section, is there any additional compensation for the landowners involved in that easement? That question may have been asked of you already.
 - A. Additional compensation for?

- Q. For if the company installs the optic cable?
- A. No, ma'am, the compensation remains the same for the schedule that was provided earlier.
- Q. Okay. Sorry. You answered some of these. I thought I got them crossed off my list but I apparently didn't. Also in Section 2f it estates that except in the event of an emergency, Grain Belt will provide notice to the Landowner at least 24 hours in advance of accessing the Property for the first time for the purpose of constructing, modifying or repairing the Facilities. Will there be any attempt to mitigate crop losses by communicating with the landowners prior to planting season if construction is scheduled to begin?
- A. So for construction, the advanced crop compensation is paid irregardless of damages. So that we are -- we are assuming damage from construction. I think you're asking will there be attempts to mitigate that. Certainly we will attempt to mitigate crop damages with landowners to the extent possible, but they will receive the advanced crop compensation



irregardless.

2.2

- Q. Okay. But basically the easement says 24 hours and the Company. As part of that mitigation strategy, has the Company discussed giving landowners a schedule ahead of time?
- A. I think it's very likely that a landowner, prior to construction the landowner will know in advance of 24 hours. I cannot say how far in advance. This in general I think is probably most applicable for maintenance or repairs, things like that, where they would occur during the operations period although it does factor into construction as well. But this is —

 If you think about, you know, if a maintenance crew needs to go out or some sort of, or landscaping of that nature, we provide 24 hours notice, at least 24 hours notice. So that notice could come in advance of that.
 - Q. On section or paragraph 4 of that agreement, it mentions the transmission vegetation management policy. Where could someone obtain a copy of that? Is that attached to the easements at all or is that somewhere with the Company where the landowners can find it?
 - A. So in Section 17 of the agricultural impact mitigation protocol, there's quite a bit of language around clearing of trees and brush and then back in



- Section 9 there's some text detailing things like fertilization and/or seeding of disturbed soil. To my knowledge, the vegetation management plan itself has not been written yet and would become in place closer to construction.
- Q. And would the Company provide that to landowners upon request or at the time the easements are established or?
 - A. I believe so.

- O. One or the other or both?
- A. I think knowing that the plan itself is not in place, I think that would be something that would be more applicable on request either closer to construction or once in operation, and part of that, you know, again part of the landowner or the agricultural impact mitigation protocol outside of just the vegetation management plan details how we will coordinate with landowners on certain practices related to vegetation management as talked about organic farms but also some cooperation and coordination around things like clearing of trees.
- Q. And then in Section 8 or paragraph 8, it's the cooperation section, it states to the extent permitted by law, landowner hereby irrevocably waives enforcement of any applicable setback requirements respecting the



location of the facilities. Do you know what the effect of that provision is and why it's needed?

- A. I don't know what the effect of that is. In terms of -- in general I think a lot of the -- in general I do not know what the effect would be. To my knowledge, there are not setbacks related to transmission lines in many, if any, of the communities that we are going through. So I don't know that it has a specific -- a specific effect. As to why it's in there, not being an attorney I could not say.
- Q. With regard to the landowner protocol and the Missouri agricultural impact mitigation protocol, those are Schedule KC-5 and KC-7, have the landowners expressed any concerns about those protocols so far or shared any industry best practices with Grain Belt beyond what is already included in those protocols that you're aware of?
- A. Not that I'm aware of. They are -- not that I'm aware of. They are accessible to landowners via the Grain Belt Project website as well as presumably through the Public Service dockets.
- Q. So you also probably -- Do you know if any of the parties or any of the landowners have requested any additions or changes to those protocols?
 - A. I'm not aware of any specific requests to

change those protocols from landowners.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

25

Q. And if construction is to begin during what is typically the crop growing season and the landowner avoids planting crops -- never mind. You've answered that one. I'll scratch that.

What's the reasonable time estimate of the time that it takes to set transmission structures over a mile of land without the need for tree removal?

- A. I'm not sure I follow the question.
- Q. How long does it take to set those transmission structures in place over the length of a mile say?
- A. That would be a question for Aaron White on the engineering team.
- Q. And this may be also, but do you know how far apart the lattice structures are spaced? This may also be elsewhere.
- A. I suspect it's filed elsewhere. I think for lattice structures potentially maybe 1,200 feet, as maybe 1,000 to 1,200 feet as an average.
- Q. Okay. And the monopoles, somebody may have answered that question earlier too, how far they're spaced apart?
- A. I believe that's filed in Aaron's testimony, but I would say between 800 and 1,200 feet would be my



guess and it just depends based on certain engineering considerations.

2.2

- Q. And again I apologize if you've answered these, but I got a little confused. How would compensation for the Phase II easements be calculated?
- A. So for Phase II, because it's an HVDC line, it would be calculated using the 110 percent of fair market value plus the structure payment compensation.
- Q. Okay. Have land values increased in Missouri since the first easements were entered into for Phase I?
- A. I don't know that I can answer that specifically. I think land values in general have been rising, but I don't know that I have the information in front of me right now to say to what degree since the first easements were signed.
- Q. In your surrebuttal testimony on page 7, lines 3 and 4 states if the Project is not achieved in advanced stage of land acquisition, then Grain Belt Express cannot obtain financing. What's considered an advanced stage of land acquisition? Do you know? What did you mean by that?
- A. So I would hesitate to put a specific percentage on that. What I would say is that would encompass in all likelihood a significant percentage of land with the confidence that we would be able to

- achieve 100 percent of easement acquisition prior to construction.
- Q. What do you think is a significant percent?

 More than 50 percent, more than 75 percent?
- A. Not being a finance expert, I don't know that I can speculate as to what percentage would be necessary to satisfy a financial counterparty.
- Q. On page 17 of your direct testimony at lines 10 to 11, and I'm sorry I'm jumping all over the place.
 - A. No problem.

2.2

- Q. You stated Grain Belt Express is planning to offer easement agreements and substantially similar forms to the one attached as Schedule KC-4, and on page 6 of that testimony you stated that 100 percent of the landowners across the existing route in Missouri have received executable agreements through the mail. How does the version of the easement agreement that was sent to the landowners along the original line as contemplated compared to those easement agreements in Schedule KC-4? Is there a difference between what was originally sent to 100 percent of landowners?
- A. So to make sure I'm clear, you're asking what is the difference between easement agreements provided to landowners along the HVDC portion of the line versus the Tiger Connector portion of the line?

1	Page 686 Q. Yes, unless there's more than one kind of
2	agreement that's been
3	A. So the difference is that the sample easement
4	that has been provided to Tiger Connector landowners
5	does include the 150 percent payment with note that if
6	required to comply with regulatory mandates specifically
7	requiring an adjustment meaning that if for some reason
8	that was not approved, we would revert to the, in all
9	likelihood, the previous version or something similar.
10	Q. So is the easement agreement in your
11	testimony, the KC-4, and the exhibits that we've entered
12	as 24 and 25, are those the same as what was sent to the
13	landowners originally?
14	A. Yes. I believe that aside from the difference
15	in compensation, the text and substance of the easement
16	agreement itself and everything that was initially
17	provided in KC-4, is the same along either the Tiger
18	Connector or HVDC route.
19	JUDGE DIPPELL: I think that's all the
20	questions I have, and I'll give the Commissioners one
21	last opportunity. No more. Okay then. Is there any
22	further cross-examination based on questions from the
23	bench from MEC?

No, Your Honor, thank you.

From Sierra Club.

MS. WHIPPLE:

JUDGE DIPPELL:

24

Page 687

1 MS. RUBENSTEIN: No, thank you. 2 Renew Missouri. JUDGE DIPPELL: 3 MS. GREENWALD: No, thank you. 4 JUDGE DIPPELL: Public Counsel. 5 MR. WILLIAMS: Thank you, no. 6 Staff. JUDGE DIPPELL: 7 Brief, Judge. MR. PRINGLE: 8 FURTHER CROSS-EXAMINATION 9 BY MR. PRINGLE: 10 Mr. Chandler, I've just got a few questions to follow up from Commissioner Holsman's line of 11 12 questioning from earlier. Are you aware of what the 13 average size of the easements the Company is pursuing 14 for the Tiger Connector? 15 Α. Average size in terms of a right-of-way or per 16 acre? 17 Ο. Per acre. 18 Α. I'm not. 19 And also are you aware if the Company has ever 0. 20 received a variance on vegetation management from the 21 Commission? 2.2 Α. I'm not aware. 23 And also right now currently for the Tiger O. 24 Connector we're looking only at lattice structures, 25 correct?



- A. For the Tiger Connector, we are presuming monopole structures.
- Q. Sorry about that. And has the Company looked at any -- If the structures were to have to become different from monopoles, has the Company done any kind of analysis as to how that could affect the 150 percent market value payments?
 - A. We have not conducted that analysis.
- Q. Do you know if an easement is signed regarding the monopole structure and then the structure is changed to let's say a lattice structure, would the Company have to revise that agreement with the landowner?
- A. Are you speaking for the Tiger Connector or for the HVDC route?
 - Q. Tiger Connector.

2.2

- A. So because -- As proposed, there are no structure payments included. So we would -- I don't believe we would have to modify the agreement should structure types change. But to be clear, the intention is to use monopole structures for the Tiger Connector.
- Q. And then I guess going back to Phase I, would there be any kind of renegotiation if the structures changed on Phase I for the HVDC line, sorry, not just the Tiger Connector. Let's say instead of lattice structures for the HVDC line those structures have



changed, would those agreements have to be renegotiated?

- A. Would you give me a second. I'm reviewing the structure estimate and advanced crop compensation calculation for the HVDC line.
 - Q. Take your time, sir.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- So the number of structures for the HVDC line, Α. the number and type of structures to be placed on a landowner's property is not something that -- it's something that is not finalized until shortly before construction. So it's clear in the structure estimate provided to landowners in the Exhibit D is that it's an estimated number of structures. As we make micrositing adjustments, the placement of structures could change along the route, and so that final total is not something that is determined until a little bit closer. So there would be no change to the easement. The final payment would be -- the structure payment would be based on the final number of structures that are installed on the property.
- Q. Looking at that Exhibit D again, if let's say it's not a lattice structure, has the Company done any kind of analysis of how that price per structure would change if it's not a lattice structure, if the structure is changed later on?
 - A. So the per payment structure for lattice is



1	\$18,000 per structure, and the per payment per
2	structure payment for monopoles is \$6,000 and the
3	difference between those are really designed to just to
4	recognize the difference in footprint between the tower
5	types.
6	Q. And then same if the structures were to
7	change, has the Company done any kind of analysis of the
8	overall cost of the Project regarding that switch?
9	A. I am not aware that an analysis has been done.
10	Mr. White on the engineering team would be more familiar
11	with the difference in cost on various structures.
12	MR. PRINGLE: Thank you, Mr. Chandler.
13	JUDGE DIPPELL: Is there any further
14	cross-examination based on bench questions from MLA?
15	MR. AGATHEN: Thank you, Judge. Yes. Hello.
16	THE WITNESS: Hello again.
17	FURTHER CROSS-EXAMINATION
18	BY MR. AGATHEN:
19	Q. I was a bit confused by an answer you gave to
20	Commissioner Holsman regarding the percent of easements
21	which I think you said which have been acquired in
22	Missouri.
23	A. Yes.
24	Q. We established this morning, did we not, that



Grain Belt has only less than 54 percent of the

easements it needs in Missouri?

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

- A. No. I disagreed with that statement earlier this morning. We are -- We have acquired approximately 60 percent of easements across the entire Project in Missouri.
- Q. Do you have a copy of your responses to our data requests?
 - A. I do, yes.
 - Q. Can you find KC2?
 - A. Yes, I do have that.
- Q. The question was with respect to page 6, lines 7 to 8 of your testimony, what percent of the easements on the original Project in Missouri has Grain Belt secured and your response was as of November 21, 2022, Grain Belt has secured roughly 53.8 percent of the easements in the original Project in Missouri, correct?
 - A. That was true as of November 21, 2022.
 - Q. And you're saying that's no longer true?
- A. I'm saying we've acquired further easements since November of last year.
 - Q. Did you update your response to our data request? Did anyone tell you that you're supposed to update your response to our data request if there's any change?
- 25 MR. SCHULTE: Objection. That calls for a



Page 692 1 legal conclusion. 2 BY MR. AGATHEN: 3 Q. Did you update your response to our data 4 request? 5 I don't recall doing so. Α. 6 And that 53.8 percent for the original Project Ο. 7 you're saying is now what? 8 I would say approximately 60 percent at this 9 point in time. 10 MR. AGATHEN: That's all I have, Judge. 11 JUDGE DIPPELL: Thank you. And is there 12 anything from Agriculture Associations. 13 No further questions, Your Honor. MR. HADEN: 14 Thank you. Mr. Hollander. JUDGE DIPPELL: 15 MR. HOLLANDER: No, Your Honor. 16 Ms. Stemme. JUDGE DIPPELL: 17 MS. STEMME: No questions. JUDGE DIPPELL: Associated Industries. 18 19 MR. ELLINGER: No questions, Judge. Thank 20 you. 21 JUDGE DIPPELL: Is there redirect? 2.2 MR. SCHULTE: Yes, please. 23 REDIRECT EXAMINATION 24 BY MR. SCHULTE: 25 Mr. Chandler, do you have a copy of the Q.

routing study which is Schedule AB-2?

2 A. I do.

1

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

- Q. Sorry. One of my documents seems to have gone missing. I have another copy though. Could you please turn to page 36 of 87 and I'm using the numbers in the bottom right-hand corner.
 - A. I'm there.
- Q. This is with regard to some questions you received regarding how the routing team reviewed and incorporated public comments. Could you please read the first paragraph of Section 4.4.2?
- Α. It says immediately following public Yes. meetings, the routing team met to review comments that were written on comment cards or maps shared in conversations with Project representatives and submitted online via the virtual meeting. In addition to making the routing team aware of general landowner concerns about the Project, these meetings provided an opportunity to revise the potential routes where feasible based on new information provided by landowners and technical guidance provided by the engineering team. Revisions to the potential route network included eliminating potential routes are shown in the refined potential route network on map 4.
 - Q. Were you a part of those meetings to review

- the public comments?
- 2 A. I was.

3

4

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- Q. And are you aware if those resulted in modifications to the route?
- 5 A. Yes, they did result in modifications to the 6 route.
 - Q. And is that Section 4.4.2 of the routing study, does the remainder of that section walk through the specific modifications that were made?
 - A. Yes. It walks through a number of specific modifications made.
 - Q. Thank you. You were asked several questions about the difference between the proposed 150 percent of fair market value payment structure versus the 110 percent plus structure payment -- payment structure.

 And in -- Do you recall those questions?
 - A. I do recall those questions.
 - Q. And are you aware that in Missouri Landowners Association statement of position they suggested that the Company should offer either/or of those payment structures to each landowner and let the landowner decide which payment structure was best for them?
 - A. I am aware of that.
 - Q. Could you discuss what practical challenges may arise if that type of compensation was required and



by challenges I am referring to challenges both to the company and to the landowner.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

- Α. Sure. So starting with challenges to the Company, it would be difficult and probably confusing to have separate payment structures for several -- for various landowners along the same route of the line as our team that processes those payments would have to navigate the differences in those payment structures, and it becomes challenging just from a processing and record keeping perspective. To the landowner, it would actually -- could actually be challenging as well, as mentioned in the response to one of the other questions, because it is impossible for us to say with any certainty how many structures a landowner will definitely receive as part of the Project. We would be asking them to make a choice based on incomplete information.
- Q. And presumably the Company would offer -- would still offer payments over time or lump sum payments under either/or scenario?
- A. Yes, it is our intention to offer the option between lump sum or annual payments for all landowners across Grain Belt.
- Q. So if the landowner was offered 150 percent of fair market value, there would also be -- there would be



two branches of that option which would be lump sum or payment over time, correct?

- A. Yeah. There would be two options under that scenario and then two further options under the other scenario as well. So four different payment options for landowners to choose from and also for our team to navigate in terms of processing and making of those payments as well.
- Q. And in your opinion, you've testified that the vast majority of landowners under the Tiger Connector will receive greater compensation under the 150 percent fair market value structure, correct?
 - A. Yes, correct.

2.2

- Q. And so generally from a general public interest perspective, is the confusion and challenges that you just discussed, what's your opinion when weighing between what you think is in the public interest between giving landowners these four options versus giving them the one option and the confusion that that would create -- sorry, that was not a very well stated question, but hopefully you understood what I was getting at.
- A. Knowing that the vast majority of landowners along the Tiger Connector route would be in most cases significantly better off with the 150 percent payment



- structure, it is our assumption that in the overall public interest for landowners along the route that the 150 percent is the better option both for that reason.
- Q. To the extent a landowner feels that the 150 percent fair market value offer does not adequately compensate them in their specific situation, is the Company willing to negotiate?
- A. We approach every conversation with landowners as a negotiation and the initial -- I mean, we make an initial easement offer in an attempt to build a relationship with the landowners and have conversations with them about valuation specific to their property.
- Q. You mentioned previously that the landowner protocols, the code of conduct, the agricultural impact mitigation protocols establish a high standard for landowner interactions for Grain Belt. Do you recall that testimony?
 - A. I do recall that.

2.2

- Q. Are employees and representatives of Grain Belt who come into contact with landowners given training on upholding those high standards?
- A. They are, yes. We conduct trainings specific to the code of conduct and agricultural protocols and the landowner protocols with both Grain Belt employees and with Company representatives.

1	Page 698 Q. Is that true if there's someone new joining
2	the team as well?
3	A. That is true, yes.
4	Q. Do you recall discussions of the payment over
5	time option? I believe that was referred to
6	occasionally as a payment in perpetuity?
7	A. I do recall that.
8	Q. Is payment in perpetuity the most accurate
9	term or is there a better way to think about that?
LO	A. I think the accurate way to consider that is
L1	payment for as long as the easement is in effect.
L2	MR. SCHULTE: Okay. Those are all the
L3	redirect I had. Thank you very much.
L4	MR. HADEN: Judge, I would request recross
L5	based on that redirect.
L6	JUDGE DIPPELL: I'm not sure. Can you be more
L7	specific, Mr. Haden.
L8	MR. HADEN: I would request to recross the
L9	witness based on at least the first few questions that
20	the Company has asked this witness in redirect.
21	JUDGE DIPPELL: Was there some new
22	information?
23	MR. HADEN: Yes. I think there was new
24	information to me based on the testimony elicited as to

why they could not give both options to landowners.

1	JUDGE DIPPELL: I'm going to allow it just
2	this once. I'm not going to make a habit. But I
3	understand that the answers to that question were a
4	little confusing. So I will allow you to ask a few more
5	questions.
6	MR. HADEN: I'll be brief, Judge. Thank you.
7	RECROSS-EXAMINATION
8	BY MR. HADEN:
9	Q. I just want to make sure I understand what
10	you're saying about the public interest elements of
11	allowing two plans. We have We've heard testimony
12	all week, you would agree, this is a complex Project
13	that's going across four states ultimately, correct?
14	A. Yes.
15	Q. Have hundreds of landowners on it, correct?
16	A. Yes.
17	Q. It's going to move a lot of electricity across
18	the country if it works out the way it's supposed to,
19	correct?
20	A. Correct.
21	Q. So you have mathematicians, engineers and
22	economists working on this Project, correct?
23	A. I can't speak to the specific backgrounds that
24	you're mentioning, but we do have a wide range of



subject matter experts.

Page 700 Q. Is it your testimony today that it would be
too confusing to track four variables of paying out to
landowners? Is that really your testimony?
A. It would be burdensome on the Company and so
because not only are we tracking different options but
we're also tracking different valuation calculations
based on 110 percent or 150 percent, and I think knowing
that it is not feasible for us to give landowners a
guaranteed structure payment we're not able to give
them a guaranteed number of structures on their property
and so close to construction. So we're putting them in
the position of making a decision based on this
incomplete information and then I think that coupled
with having, you know, having to manage different
payment structures we would be it would be
significantly burdensome on our accounting and accounts
payable departments.
Q. Do you think the Company would entertain an
offer to create an Excel spreadsheet that would
automatically do that math from the Agricultural
Associations? It's a facetious question. I'm sorry.
MR. HADEN: You've answered my question.
That's all I had, Judge. Thank you.

Mr. Schulte, would you like JUDGE DIPPELL: any further redirect?



Page 701

1 MR. SCHULTE: No, thank you. 2 JUDGE DIPPELL: Thank you. Mr. Chandler, I 3 believe that concludes your testimony. 4 THE WITNESS: Thank you, Judge. 5 JUDGE DIPPELL: You may be excused. 6 (Witness excused.) 7 JUDGE DIPPELL: All right. I think we can 8 move on to Grain Belt's last witness who is only 9 available today. So we will complete his testimony one 10 way or another today. 11 Musical chairs, sorry, Judge. MR. SCHULTE: 12 Can I get you to That's fine. JUDGE DIPPELL: 13 raise your right hand. Do you solemnly swear or affirm 14 that the testimony you're about to give at this hearing 15 will be the truth? 16 THE WITNESS: I do. Thank you. If you could state 17 JUDGE DIPPELL: 18 and spell your name for the court reporter. 19 THE WITNESS: Yes. My name is David, 20 D-a-v-i-d, Loomis, L-o-o-m-i-s. 21 JUDGE DIPPELL: And whenever you're ready, 2.2 Counsel. Take your time. 23 MR. PLUTA: Good afternoon, Dr. Loomis. 24 DAVID LOOMIS, 25 having been first duly sworn, was examined and testified

1	as	follows	:
---	----	---------	---

2 DIRECT EXAMINATION

3 BY MR. PLUTA:

11

12

13

14

15

16

17

18

19

23

24

- Q. Could I get you to state your name and business address?
- A. Yes. My name is David Loomis. My business address is 2705 Colby Court. That's Bloomington, lllinois 61704.
- 9 Q. By whom are you employed and what are your 10 position titles?
 - A. I am President of Strategic Economic Research
 LLC, a consulting firm that I own. I am also Professor
 Emeritus, a Professor of Economics at Illinois State
 University.
 - Q. Okay. Are you the same David Loomis who filed direct and surrebuttal testimony and accompanying Schedules DL-1 and DL-2 on January 18, 2023 and May 15, 2023 and marked as 21 and 22 respectively, Exhibits 21 and 22 respectively?
- 20 A. Yes.
- Q. Do you have any additions or corrections to make to your testimony at this time?
 - A. Yes, I have just a few. On my direct testimony, page 3, line 4, I'd like to insert the word emeritus, e-m-e-r-i-t-u-s, after professor. At the time



- Transcript of Proceedings June 07, 2023 Page 703 1 that I wrote this, I was a professor of economics and 2 employed at the university. As of June 1, I've retired 3 and so I retain the title of professor emeritus. 4 Ο. Okay. Do you have any other additions or 5 corrections to your testimony? 6 On my surrebuttal testimony, page 3, Α. Yes. 7 line 4, again I would insert emeritus after professor. 8 0. Okay. 9 And then on page 5 of my surrebuttal Α. testimony, footnote 2, I'd like to change Sarah Lange to 10
- 11 Krishna L. Poudel, P-o-u-d-e-l, PhD. I attributed that 12 statement to the wrong individual. 13 Ο. Thank you. Other than those corrections, do 14 you have any other additions or corrections to make to
- 15 your testimony at this time?
- 16 Α. No.

18

- And other than the changes you noted, Ο. Okay. if I asked you the same questions again today, would your answers remain the same?
- 20 Α. Yes.
- 21 MR. PLUTA: Thank you. I would move the 2.2 Commission to enter Exhibits 21 and 22 into the record.
- 23 JUDGE DIPPELL: Would there be any objection 24 to Exhibits 21 and 22? Seeing none, I will admit those 25 exhibits.



1 (COMPANY EXHIBITS 21 AND 22 WERE RECEIVED INTO 2 EVIDENCE AND MADE A PART OF THIS RECORD.) 3 MR. PLUTA: Thank you, Dr. Loomis. I have no 4 further questions. Your Honor, I tender the witness for 5 cross-examination. 6 JUDGE DIPPELL: Thank you. Is there any 7 cross-examination from MEC? 8 MS. WHIPPLE: No, Your Honor. Thank you. 9 Sierra Club. JUDGE DIPPELL: 10 MS. RUBENSTEIN: No, Your Honor. Thank you. Renew Missouri. 11 JUDGE DIPPELL: 12 No, thank you. MS. GREENWALD: 13 JUDGE DIPPELL: Clean Grid Alliance. 14 MR. BRADY: No, thank you. 15 JUDGE DIPPELL: Public Counsel. 16 MR. WILLIAMS: Thank you, no. 17 Staff. JUDGE DIPPELL: MR. PRINGLE: Brief, Judge. Good afternoon, 18 19 Dr. Loomis. 20 THE WITNESS: Good afternoon. 21 CROSS-EXAMINATION 2.2 BY MR. PRINGLE: 23 I just wanted to get your definition of a few 24 economic terms for the record. How would you define 25 economic feasibility?



A. Economic feasibility really deals with a forward-looking standard for a project and say whether the revenues for that project would be sufficient to cover the expected cost.

1

2

3

4

5

6

7

8

9

10

13

14

15

16

17

18

19

20

21

22

- Q. Thank you, sir. How would you define economic viability?
- A. I guess I would put those together in terms of a feasible project and a viable project would be synonymous.
 - Q. How do you define revenue certainty?
- 11 A. I'm not sure I have a good definition for that
 12 out of context.
 - Q. And then how would you define financial feasibility?
 - A. I guess if I had to look at those differently, financial would include the ability to procure either debt or equity financing in order to do it. So the difference in my mind would be that it might be economically feasible but you'd need to get investors and the capital to actually do the project so it would be financially feasible.
 - Q. Would you also see financial viability the same as financial capability?
- A. Yeah. I think if you're financially capable you'd be -- it would be financially feasible.



1	Q. And last question, Dr. Loomis, to maximize the
2	benefits that you describe in your study, does the
3	entire project need to be constructed to maximize those
4	benefits?
5	A. To maximize the benefits, the whole project
6	would need to be available, yes.
7	MR. PRINGLE: Thank you for your time,
8	Dr. Loomis. No further questions.
9	JUDGE DIPPELL: Are there any questions from
10	MLA?
11	MR. AGATHEN: Thank you, Judge. Good
12	afternoon, Dr. Loomis.
13	THE WITNESS: Good afternoon.
14	CROSS-EXAMINATION
15	BY MR. AGATHEN:
16	Q. In making your estimates of the economic
17	impact of the Project you used what is called the IMPLAN
18	computer model, I-M-P-L-A-N all caps; is that correct?
19	A. That's correct.
20	Q. Could you turn, please, to page 8 of your
21	direct testimony.
22	A. Okay.
23	Q. Looking at line 3, is it correct that using
24	the IMPLAN model you estimated that for the three-year
25	construction period of the Project it would produce the

- 1 full-time equivalent of about 5,747 new construction
- 2 | jobs in Missouri?

7

8

9

- A. It would create or support that number of jobs, yes.
 - Q. That's the total for all three years?
- 6 A. That's correct.
 - Q. And at line 11 of that same page, you state that the total earnings impact from these construction jobs would be just over 586 million in Missouri; is that correct?
- 11 A. That's correct.
- Q. And that's also a total for three years, correct?
- 14 A. Yes.
- Q. Do you know how many of those one-time construction jobs would be filled by residents of Missouri as opposed to workers who move from one transmission project to the next?
- A. That would be dependent on the hiring practice of the contractor that would do that.
- 21 Q. So you don't know?
- 22 A. I can't say for certain.
- Q. Workers do move from one-time jobs to the next, do they not?
- 25 A. That's correct.



1	Q. Your study assumes that the construction work
2	in Missouri would be filled 100 percent by residents of
3	Missouri, does it not?
4	A. That's correct.
5	Q. The wages and job figures we discussed are
6	what you would consider positive impacts from
7	construction of the Project, correct?
8	A. I estimated both construction and operations
9	but that's correct.
10	Q. Positive impacts?
11	A. Positive impacts.
12	Q. Isn't it true that the IMPLAN model is also
13	capable of accounting for negative economic impacts of
14	building a Project like the Grain Belt line?
15	A. The software is capable of estimating impacts
16	depending on how you put in those variables. So yes,
17	it's capable.
18	Q. Positive and negative?
19	A. Yes.
20	Q. When running the IMPLAN model in this case,
21	isn't it true you did not account for a single negative
22	economic impact from building the Grain Belt Project?
23	A. My analysis was limited to looking at those

LEXITAS

24

25

Q.

impacts for construction and operations of the line.

So the answer is no, you didn't consider any

negative impacts?

1

4

5

6

7

8

9

10

19

20

21

22

23

24

- A. And I also did not consider some positive impacts.
 - Q. Correct. But my question was about negative and your answer is you did not consider any?
 - A. I did not. I have negative impacts in my study.
 - Q. Did you read the testimony of Mr. Petti in this case?
 - A. Yes.
- At page 9 of his direct testimony Mr. Petti 11 Ο. 12 estimated that the addition of the Grain Belt Project 13 will mitigate additional generation capacity investments 14 of approximately 526 million per year or 7.6 billion for 15 the life of the Project. So my question is, if his 16 assessment is accurate, some generation Projects will 17 not be built because of the addition of the Grain Belt 18 line; is that correct?
 - A. I don't have his testimony; but assuming that that's what his study said, yes, I did not include those numbers in my analysis.
 - Q. And for each of those Projects which are not built, there obviously would be no jobs or other benefits created by these unbuilt Projects, correct?
 - A. I'm sorry. I'm lost in the hypothetical. In



- his testimony was he saying that those other generating plants would have been built except for this line so there's new generation that will not be built because of the line?
- Q. That's essentially correct, there's new generation that will not be built because of the Grain Belt Project.
 - A. Okay. And could you restate the question.
- Q. Sure. And for those Projects which are not built, there obviously will be no jobs or other benefits created by the unbuilt Projects?
 - A. I did not put that into my model.
- Q. The loss of the jobs?

2

3

4

5

6

7

8

9

10

11

12

16

17

18

19

20

21

2.2

23

24

- A. I did not account for those numbers from his study in my analysis.
 - Q. And it's not just the initial construction jobs which are lost but also the O&M jobs over the life of those plants, correct?
 - A. Again, if these hypothetical new plants were built, it would include both the construction impacts and the operations impacts.
 - Q. And so if they're not built, there's a negative impact both from construction and from the ongoing O&M process, right?
 - A. Again, in this hypothetical, that's correct.



1	Q. Beginning at page 11 of his direct testimony
2	in this case beginning at line 21, Grain Belt's witness
3	Mr. Repsher testified that the supposedly low-cost power
4	from the Grain Belt Project will displace higher-cost
5	power from inefficient generators in MISO and Associated
6	co-op and in other areas. If power is displaced from
7	Associated co-op, for example, that means that
8	Associated would be producing less power than it would
9	have without the Grain Belt Project, right?
10	A. Could you state the question again.
11	Q. Sure. If power is displaced from Associated
12	co-op's plants, just as an example, that means that
13	Associated would be producing less power
14	MR. PLUTA: Objection.
15	BY MR. AGATHEN:
16	Q than they would have been without the Grain
17	Belt Project?
18	MR. PLUTA: Mr. Agathen, can you point to
19	where in Mr. Repsher's testimony he said that Associated
20	co-ops would be shut down.
21	MR. AGATHEN: I didn't say shut down.
22	MR. PLUTA: Can you point to?
23	MR. AGATHEN: At page 11, beginning at line
24	21, he testified that the supposedly low-cost power from
25	the Grain Belt Project will displace higher-cost power

- from inefficient generators in MISO and Associated co-op and in other areas.
- MR. PLUTA: And your question based on that testimony was?

5 BY MR. AGATHEN:

1

2

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

- Q. If power is displaced from Associated co-op's plants, that means that Associated would be producing less power than it would have been without the Grain Belt Project?
- A. I don't agree from the word displace doesn't mean that it is shut down or that there's no other -- I think your premise would only be true if that generating plant was not -- was shut down.
- Q. I'm saying that it is producing less power because of the Grain Belt Project.
- MR. PLUTA: Objection. I don't believe that's what Mr. Repsher's testimony states. It says that it displaces higher-cost power but it never states that there would be a corresponding reduction in power from another generation facility. So I think you're assuming a fact that's not currently in evidence.
- MR. AGATHEN: I disagree. He said that it would displace -- the Grain Belt Project would displace the output from other plants.
- JUDGE DIPPELL: The testimony says displaces

Page 713

- higher-cost power from inefficient generators in MISO, SPP and SERC AECI. So inefficient generators in those areas. So that seems to say what Mr. Agathen's question is asking.
- BY MR. AGATHEN:

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

- Q. Do you remember the question?
- So when you're -- Just because you're Α. Yes. displacing that electricity, I'll go back to the case, you really need to say that you're shutting down that generating unit. Much of the costs of a generating plant are fixed costs. Even in some cases the labor in operating a plant, whether it's running at 40 percent capacity or 80 percent of its capacity, typically the same number of employees would be working. If it's a fossil fuel plant, there would certainly be savings in terms of the fuel costs. But the premise in terms of displacing is an accurate I think you have to go all the way to say no, no, the plant was shut down and is no longer in operation for you to definitively say that there's going to be job losses.
- Q. What if, and I'm not talking about job losses at this point, what if a plant in Associated's area or anywhere else that we're talking about here, their power production is cut back because of the Grain Belt line. Is there a negative consequence there for that power



plant?

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

- A. It would depend. And as I said, you know, there would be less -- in my hypothetical, there would be less fuel that would be utilized but then it would depend on where that fuel is sourced from. Many coal plants get their coal from the Powder River Basin because it's low sulfur coal and in that way the decrease in coal usage would be felt in Wyoming and the Powder River Basin rather than coal producers here in Missouri.
 - Q. Did you consult with Mr. Repsher about the amount of power which he believes will be displaced by the Grain Belt Project?
 - A. No, I did not consult with him.
 - Q. If enough power is displaced by the Grain Belt line, it could also impact the need for O&M expenditures at that plant, could it not?
 - A. Yes.
- Q. And that would logically reduce the amount of labor involved in O&M operations, right?
- A. No.
- Q. Well, for example, if the power plant shuts down one unit, they're not going to have to clean the boilers there, right?
- 25 A. Yes. So you would have to add that condition



to your statement. It just does not logically follow to
say operations and maintenance costs are reduced,
therefore labor is reduced. You have to go into the
specifics. So in your case if you shut down a unit and
you no longer have to perform maintenance on that unit
as a whole, yes, in that example. But you've now set
more conditions to and provided some more information.
It's not the general case where operations and
maintenance expense is reduced will reduce the labor
expense.

- Q. Let me ask you this. Does your IMPLAN model reflect any of the consequences of reduced power production at other plants in Missouri?
 - A. No.

2.2

- Q. On a related subject, did you do any kind of analysis to determine the negative impacts from the line on the elimination or deferral of utility demand-side programs?
 - A. Restate the question, please.
- Q. Did you do any kind of an analysis to determine the negative impacts from the line on the elimination or deferral of utility demand-side programs?
- A. I'm just failing to see the linkage between the line and the demand-side management programs.
 - Q. But your analysis did not take into



- 1 consideration any impact on demand-side programs?
 2 MR. PLUTA: Objection. Assumes facts not in
- evidence. Mr. Agathen hasn't laid foundation for a link
 between the Project and demand-side programs.
 - JUDGE DIPPELL: I'm going to overrule the objection. He can answer whether he considered it or if he doesn't think there's a link then.
 - THE WITNESS: I fail to see the linkage and therefore I did not consider it relevant to be included in my analysis.
- 11 BY MR. AGATHEN:

6

7

8

9

- Q. Okay. So I think we can cut this short. Your analysis did not include any impact from demand-side programs?
- 15 A. That's correct.
- Q. Thank you. Could you please turn to page 5 of your direct testimony. Do you have it?
- 18 A. Yes, I'm at page 5.
- Q. Beginning at line 14, you distinguish between the direct and indirect effects of a construction project like the Grain Belt line, correct?
- 22 A. Yes.
- Q. And the direct effects include such impacts as spending and wages?
- 25 A. Yeah, those are the spending and wages of

employees of Invenergy or their contractors.

- Q. Sure. And the indirect effects are production changes resulting from the changes -- changing input needs of a directly affected industry such as steel purchasing to be used for the support structures; is that generally correct?
- A. Those are looking at those supply chain impacts of those industries that would be providing materials.
 - Q. And those are the indirect impacts?
 - A. Correct.

- Q. Assuming that the Grain Belt line does result in negative direct effects such as from the elimination of generation or transmission projects, given that assumption, then it would also result in negative indirect effects associated with those eliminated projects, correct?
- A. Again, I don't believe that there's going to be those negative impacts in the hypothetical question and then again the linkage, I'll go back to my coal example, it will depend where those supply chain impacts are felt where those supply chain materials, and so forth, are being sourced from. If it's out of state, then there would be no impact to Missouri like in the case of Wyoming Coal.

2.2

- Q. You're not saying, are you, we're going back a couple questions earlier, you're not saying that there's no negative impact if a plant is not built at all because of the Grain Belt Project?
- A. I'm not agreeing with the premise that there's a linkage between the line and the generating asset not being built.
- Q. So you don't think that the Grain Belt Project would put plants that would otherwise have been built in a status where they economically will not be built; you don't think that that's the case?
- A. Again, that would be a different analysis to look at. It assumes that there's a zero-sum game such that if you added one thing it will necessarily mean that you're going to decrease something else and I don't think that's the case here. I think we're looking at electricity demand growing.
- Q. Despite the testimony of Grain Belt witnesses in this case to the contrary?
- MR. PLUTA: Objection. Mischaracterizes the evidence. I don't believe any Grain Belt witnesses have said that there's going to be a decrease of amount of electricity in the system.
- MR. AGATHEN: Not a decrease in electricity but that plants will not be built because of the Grain

1 | Belt Project.

MR. PLUTA: Again, I don't think any Grain
Belt witnesses said explicitly that there's going to be
a plant that will not be built because of the Grain Belt
Project's existence.

MR. AGATHEN: Well, I'm referring to the testimony that we covered earlier. I hate to have to go back and reread this, but at page 9 of Mr. Petti's direct testimony lines 11 to 13 he estimated that the addition of the Grain Belt Project will mitigate additional generation capacity investments of approximately \$526,000,000 per year or 7.6 billion for the life of the project. So Your Honor, I think there certainly is evidence in the case that according to Grain Belt there are projects that will not be built because of the Grain Belt Project.

JUDGE DIPPELL: Okay. I will overrule the objection.

MR. AGATHEN: Do you want me to repeat the question?

THE WITNESS: Please. Thank you.

22 BY MR. AGATHEN:

Q. Assuming the Grain Belt line does result in negative direct effects such as from the elimination of generation or transmission projects and it would also



- result in negative indirect effects associated with these eliminated projects.
 - A. Again, assuming that that premise is true, you would have to look at where the supply chain impacts are coming from, where are the source materials.
 - Q. Sure. But there would be negative impacts somewhere?
- A. Somewhere. It might not be in Missouri. It could be overseas.
- Q. Do you know who is supposed to construct the Grain Belt line, what workers from what locations?
- 12 A. In our study, we assumed that those were going 13 to be local construction workers.
 - Q. Isn't it logical to say that those same areas would be the source of workers for plants that are not built?
 - A. That's going to depend on Company hiring processes.
 - Q. But it certainly could be?
 - A. It is possible.

2

3

4

5

6

7

8

9

10

11

14

15

16

17

18

19

- Q. I mean, isn't it likely?
- A. Again, it will depend on a host of factors
 including, you know, again their hiring practice, what
 kind of generation it is. You know, if it were -- I'll
 just give you, again we're in the land of hypotheticals.



- Right. If we're building a new nuclear power plant,

 there may be specialized expertise in that that's not

 contained in Missouri. So I don't think you can just

 say for sure what those impacts are going to be. You'd

 have to study that.
 - Q. Do you know where the workers came from that built the Callaway Nuclear Plant in Missouri?
 - A. I do not.

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

- Q. Would you agree that if the Grain Belt Project is to be economically feasible, it will need to recover its cost of doing business?
- A. Cost recovery is a regulatory construct. And I believe this is going to be a merchant plant. So I wouldn't use that terminology for a market based.
- Q. Well, it's going to incur costs, is it not, the Grain Belt Project?
 - A. Could you restate the question.
- Q. Would you agree that if the Grain Belt Project is to be economically feasible, it will need to recover its costs of doing business?
- A. So I would say that if it's going to be economically feasible, the revenues from Grain Belt Express would have to exceed its costs.
- Q. Thank you. And would recover those costs from entities buying capacity on the line, correct?



- A. I'm not familiar with how they would structure the products that they're selling to say that for sure, but they would have to have revenue sufficient to cover their costs.
- Q. So for example, if they sold capacity to Ameren, that would cover partially at least the cost of the Project?
 - A. Yes.

2.2

- Q. In the normal course of events, if an end-use supplier such as Ameren purchased capacity on the Grain Belt line, you would expect to recover the costs of that capacity from its retail customers, correct?
- A. I believe that's a decision for the Commission. They would be in the position to say what is allowed in rate base, whether it's used and useful, whether it was prudently incurred. That would be a Commission decision that Ameren would have to request that to be allowed in rate base.
- Q. If it was a prudent decision to buy capacity, Ameren certainly would expect to recover those costs from its retail customers, would it not? It's not going to go out and buy capacity that it's just going to lose obviously?
- A. They would have the expectation certainly but it would be the Commission's decision as to whether that



actually gets recovered in rates.

- Q. Sure. And my question was, wouldn't Ameren expect to recover those costs?
- A. If they prudently incurred that capacity and it was used and useful, they would reasonably expect for that to be recovered in rates as a regulated utility.
- Q. Could you turn to page 6 of your Schedule DL-2.
- A. Okay.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- Q. In the right-hand column there you state that local governments in Missouri will be paid millions of dollars by Grain Belt in property taxes, correct?
- A. That first -- I state that the first full year property taxes would be \$13.9 million.
- Q. And the money paid by Grain Belt for property taxes will ultimately be recovered in the cost of capacity paid to Grain Belt, correct?
- A. They would pay that out of the revenues that they would receive from the Project.
 - Q. The answer is yes?
- A. I guess I'm -- could you restate the question.
- Q. The money paid by Grain Belt for property taxes will ultimately be recovered in the cost of capacity paid to Grain Belt?
- A. That would be the plan, yes.



	, , _ , , _ , , , , , , , , , , , , , ,
1	Page 724 Q. And if the capacity is purchased by an end-use
2	provider, again hypothetically Ameren, the utility would
3	normally expect to recover those costs from its retail
4	customers, correct?
5	A. Again, the expectation would be, but that
6	would be a Commission decision.
7	Q. Sure. I'm well aware of that. So you list
8	the property taxes let me strike that. Could you
9	turn, please, to Schedule DL-2 to your testimony?
10	A. Yes.
11	Q. Looking at the middle of page 6 of 27, your
12	study assumes that the total investment in the Project
13	from Grain Belt will be \$7 billion, correct?
14	A. Yes. The line actually says the Grain Belt
15	Express transmission line represents a \$7 billion
16	investment by Invenergy Transmission.
17	Q. Right. Was that \$7 billion figure given to
18	you by someone from Grain Belt?
19	A. That \$7 billion includes both the up-front
20	capital expenditure for the Project as well as I believe
21	it was the first 30 years of operations. So the capital



of \$7 billion based on their numbers.

22

23

24

25

expenditures was provided by Invenergy. The operations

I think I did the calculation to come up with that total

and maintenance figures were provided by Invenergy.

	Transcript of Proceedings	June 07, 20
1	Q. So that's not just for the construction	Page 725 of the
2	Grain Belt line?	
3	A. That's correct. That represents an inv	estment
4	of both the construction costs and a minimum of f	irst 30
5	years of life in terms of operations and maintena	nce

- And did you base your calculations of the Ο. benefits, the savings from wages, et cetera, on the initial construction of the Project or did you also add in all these ongoing costs you've been talking about?
- So I did two separate models. The first model was the impact storing construction and the second actually set of models was the ongoing annual impacts storing the life of the Project. So I separated those two out.
- Understood. Is it fair to say that Grain Belt Ο. did not ask you to look at or quantify any of the negative consequences which might result from its Project?
- MR. PLUTA: Sorry, Mr. Agathen, I missed that question. Could you ask that again.
- 2.2 BY MR. AGATHEN:

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

23

24

25

expenditures.

Is it fair to say that Grain Belt did not ask you to look at or quantify any of the negative consequences which might result from its Project?



A. They did not ask me. They did not limit the
scope. This report is typical of the types of reports
that I produce for other energy projects. So there's
nothing particularly in this report that Invenergy asked
me to tailor to this specific analysis. It's the
analysis that I typically perform for energy projects.

- Q. But there are models which are capable of quantifying at least some of the negative impacts that are caused by a project like the Grain Belt line, are there not?
- A. I suppose certainly there are others who may look at that.
 - Q. Through a different model?
 - A. Yes.

2.2

- Q. Would you agree that if you determine that a project will produce certain economic benefits such as jobs that it's still important to determine the net impact after taking into account the economic detriments?
- A. If there are economic detriments and you can quantify them, they should be taken into account.
- Q. And the net benefits net of any project including Grain Belt line would be the difference between the positive benefits and the negative detriments, correct?



1	Page 727 A. Yeah. I think as I've already stated I, in
2	addition to agreeing with you, that I did not include
3	some of those what you've posed as hypothetical
4	detriments. There's also benefits that I did not
5	quantify.
6	Q. I understand. We're looking just at the
7	testimony and studies that you presented here, right?
8	A. Right. So my study looks at the economic
9	benefits of construction and operations of the line.
10	Q. On a different subject in estimating the
11	positive impacts of the Project, we've established that
12	one input to your model is the wages, salary and
13	benefits to the workers who would be employed in
14	construction of the line; is that generally correct?
15	A. Yes.
16	Q. And those wages and benefits figures were
17	provided by Grain Belt to you?
18	A. They provided a breakdown of the capital
19	expenditures that also included their expected labor
20	expenditures.
21	Q. So the labor expenditures were given to you by
22	Grain Belt?
23	A. That's correct.
24	Q. Were those gross wages?

Yes, those were gross wages that they expected

25

Α.

to pay.

- Q. And that would include an amount which will be withheld for various reasons from the workers just like federal income taxes, for example?
- A. Right. Typically we look at earnings. In my report, I'm looking at both wages and benefits. So it's a kind of total compensation package and as you're well aware it's going to be money deducted from that. So the net pay that a worker will receive will be less than the total earnings that I list in my report.
- Q. So the workers will not receive all of the wages that you have used in your report?
- A. That's correct, in addition to those deducted from the employees' wages would obviously be the employer side of social security, a tax that would be in that number as well in terms of total earnings, but obviously they are not getting directly compensated for that.
- Q. Other than income tax deductions from the paychecks, are there other deductions as well?
- A. I think taxes are going to be the big one. In a model like IMPLAN, they don't think that they go down to the specificity of like, for example, a 401k plan where it could be deducted from your pay but then, you know, it's still yours, it goes into an account, and so

- forth. I think this is more of a global picture of earnings, but there would be other deductions like that.
- Q. Other deductions that workers do not receive any benefit from. In the example you gave of a 401k plan, that's not really a loss to the worker, but are there other deductions which are like taxes a real loss to the worker?

MR. PLUTA: I would object to the extent that you're implying that paying taxes doesn't somehow return a benefit to the employee.

MR. AGATHEN: I'm not implying that at all.

I'm just saying that the figures, in fact, Dr. Loomis

has included for wages which he attributes to be

benefits for the Grain Belt line, he's saying that the

gross pay is what he included and I'm simply asking

aren't there deductions so that his figures are in

effect overstated.

JUDGE DIPPELL: With regard to the question that you specifically asked and to the extent that it implied paying taxes was not a benefit to the employee, then I'll sustain that objection, but I think you can rephrase your question. However, the witness has said that he used gross wages.

24 BY MR. AGATHEN:

Q. Okay. Just to clarify, Your Honor, I hope I'm

- not repeating here. The figures that you use in your study are gross wages, right?
 - A. It's not only wages but wages and benefits.
 - Q. Right. Understood.
 - A. It's total compensation.
- Q. Total compensation, but you've included the gross amount of the wages?
- A. Right. This is not net. This does not represent the final paycheck that the worker is going to receive at payday.
- Q. Okay.
- 12 A. Yes.

2

3

4

5

6

7

8

9

10

11

13

14

15

16

17

18

19

20

21

2.2

23

24

- Q. I think we're good. On a different subject, does the IMPLAN model reflect any negative consequences associated with accidents and worker injuries which could occur in building a transmission line over 200 miles in length?
- A. So to be clear, the IMPLAN model is looking at relationships between industry segments in the economy. So if you were to quantify some type of impact from construction workers, you may be able to get IMPLAN to give you estimates of the total economic impact of that. Probably more to your point, I did not quantify any type of input like that nor did I run an IMPLAN model to quantify that.



1	MR. AGATHEN: Thank you. Your Honor, at this
2	time I'd ask the Commission to take administrative
3	notice of one page from the transcript of the first
4	Grain Belt case. That was EA-2014-0207. Specifically
5	page 1500 from the transcript in that case.
6	JUDGE DIPPELL: And for the benefit of those
7	online that you said that was page 1500 of the
8	transcript?
9	MR. AGATHEN: Yes, lines 4 through 17
10	through 18.
11	JUDGE DIPPELL: Lines 4 through 18.
12	MR. PLUTA: We're going to object to this for
13	a few reasons. First, this is a series of one, two,
14	three questions and answers that Dr. Loomis gave to
15	Chairman Kenney in the EA-2014 case. Without including
16	the entirety of Dr. Loomis's testimony, you know, at
17	initial level it seems improper. Second, Dr. Loomis's
18	analysis in the 2014 case would have been cordoned to
19	the specifics of the Certificate of Project as opposed

20 to the Amended Project. So all of the numbers are

different too. So I don't know if it's fair to cherry

pick this section of his previous testimony without more

23 context at least.

21

22

24

25

Mr. Agathen. JUDGE DIPPELL:

Yes, Your Honor. If a witness MR. AGATHEN:

2.2

Page 732

has said something during the course of a hearing, it
would be virtually impossible to continually bring in
the entire transcripts of testimony not only in this
instance but for other cases of impeachment. It would
just be too cumbersome a process and there's really no
reason for it. These words on this page speak for
themselves.

MR. PLUTA: I think the other issue that I have is assuming you plan to use the highlighted text in terms of following the best evidence, Dr. Loomis has been pretty clear that he used gross economic benefits as his calculation tools and not net economic benefits. So I don't really see the point in bringing up a similar economic model that he used in the past when he's already answered the same questions that you've asked about the current model.

JUDGE DIPPELL: Mr. Agathen, what is the purpose of this testimony? Are you using this to -- of the page of the transcript.

MR. AGATHEN: To nail down the concept that he has not looked at any negative consequences of building the Grain Belt line.

MR. PLUTA: He's answered that question.

JUDGE DIPPELL: I have to agree. I think that that is clear from the witness's testimony. I'm not

1	sure what this page from the transcript adds to that.
2	MS. WHIPPLE: And Your Honor, if I could add
3	an objection before Your Honor rules, MEC makes a
4	straight-up due process objection. We were not a party
5	in the 2014 case, and so sworn testimony cannot be
6	admitted against us without denying us the opportunity
7	to meet that evidence with our own testimony or
8	cross-examination. Since we weren't a party, that
9	opportunity is lost and so for our objection is
10	straight-up due process.
11	JUDGE DIPPELL: Mr. Agathen, do you have any
12	other argument that you wish to make?
13	MR. AGATHEN: I don't think so, Your Honor.
14	I'd be repeating myself.
15	JUDGE DIPPELL: I'm going to sustain the
16	objections and not admit this, but I am marking it as
17	Exhibit 303 for identification purposes and so that it
18	can be included in the record
19	MR. AGATHEN: Thank you, Judge.
20	JUDGE DIPPELL: but not as evidence.
21	MR. WILLIAMS: Judge, since you're marking it
22	as an exhibit, are there additional copies?
23	JUDGE DIPPELL: Oh, I'm sorry. We can get
24	additional copies, but that is in the Case EA it's
25	EA, isn't that correct, Mr. Agathen?



1	MR. AGATHEN: Right.
2	JUDGE DIPPELL: 2014-0207, is that correct,
3	and it's page 1500, lines 4 through 18 of the
4	transcript.
5	MR. AGATHEN: It's obviously available on the
6	EFIS system.
7	JUDGE DIPPELL: Yes.
8	MR. WILLIAMS: I'm not asking for a physical
9	copy now. Thank you. That will suffice.
10	JUDGE DIPPELL: Okay. Thank you. Do you have
11	additional questions, Mr. Agathen?
12	MR. AGATHEN: I do, Judge.
13	BY MR. AGATHEN:
14	Q. On a number of questions based on your
15	surrebuttal testimony, at page 5 of your surrebuttal you
16	mention that you have prepared economic analyses which
17	were used in two prior cases at the Commission; is that
18	correct?
19	A. Where is that in my surrebuttal testimony?
20	Q. Page 5.
21	A. Page 5. Yes, I prepared a report that was
22	attached to somebody else's rebuttal testimony
23	previously.
24	Q. So you didn't actually present testimony in



That would have

the last Grain Belt CCN case, right?

been EA-2016-0358?

1

2

3

4

5

6

7

8

9

10

12

13

14

15

16

17

18

19

20

21

2.2

23

- A. I believe that's correct, just the report.
- Q. And someone else submitted your report as an attachment to their testimony?
 - A. I think so.
- Q. In that 2014 case, you also used the IMPLAN computer model to quantify your benefits, did you not?
 - A. Yes.
- Q. Do you recall what the Commission said about your analysis in that first Grain Belt case?
- 11 A. No.
 - MR. AGATHEN: I'm handing the witness a two-page excerpt pages 17 and 25 from the Report and Order in Case No. EA-2014-0207.
 - MR. PLUTA: I would point out that this is the Report and Order in EA-2014-0207 issued on July 1, 2015. The Commission later ruled in EA-2016-0358 a Report and Order on Remand. The Report and Order on Remand is what is referenced in Dr. Loomis's testimony and not this Report and Order that Mr. Agathen has presented.
 - MR. AGATHEN: The witness didn't testify in the last case. So this is a Commission finding as to the validity of his model and the use of the model to support the benefits of the Grain Belt line.
- JUDGE DIPPELL: And did you hand me a copy of



that, Mr. Agathen?

2.2

MR. AGATHEN: I'm sorry. Sorry, Judge, I did not. I have to take it back from the witness momentarily.

MS. WHIPPLE: Your Honor, again since this is the case MEC was not a party to, could we have just a minute maybe to look over Grain Belt's shoulder, because we don't have a copy of what this is either and I don't know if I need to object.

JUDGE DIPPELL: Yes.

MR. PLUTA: For the record and for people that are following along at home, this is a three-page exhibit, one of them is a cover sheet for the Report and Order issued in July 1, 2015 in EA-2014-0207 and it's an excerpted portion that begins on page 17 of the Report and Order and goes -- I'm sorry. It's two different pages that are not consecutive. One of them is page 17 of the Report and Order. I have highlights on paragraphs 54 and 55 and then the next page is page 25 of the Report and Order and I have highlighted a single sentence from the second paragraph on the page. We need a second to review this.

JUDGE DIPPELL: I think this is probably a good place to take a break. Okay. Let's take a break for 15 minutes and return at 3:35.



1 MR. PLUTA: Thank you.

2.2

2 JUDGE DIPPELL: We can go off the record.

(A recess was taken.)

JUDGE DIPPELL: Okay. We're back on the record after a break. There was some discussion. We're going to try to stay late this evening to make up some lost time. So where we left off was Mr. Agathen had requested the Commission to take official notice of a couple of pages from a transcript -- from a Report and Order in EA-2014-0207. Did I characterize that correctly, Mr. Agathen?

MR. AGATHEN: Judge, I'd like the witness to read in the highlighted portions from that Order.

MR. PLUTA: Your Honor, so I believe when we were leaving for the break we wanted an opportunity to review to decide if we wanted to object and decided to object. This is a Report and Order from the 2014 case which, you know, resulted in the denial of a CNN. But later in the 2016 case with the revised application the Commission ruled in Grain Belt Express's favor and cited positively to Dr. Loomis's report. To the extent that Mr. Agathen wants to cite to this in his briefing, he's certainly allowed to. It's part of the Commission's previous orders, but I don't really see the relevance in having Dr. Loomis read this into the record.



Page 738

MS. WHIPPLE: Your Honor, when you're ready, MEC would have its own objection.

JUDGE DIPPELL: Go ahead.

2.2

MS. WHIPPLE: Yes, Your Honor. The same due process objection that we raised to Mr. Agathen's attempt to have the witness read in partial testimony from the 2014 case, we have the same objection for reading into the record of evidence a piece of the Report and Order from that case because, of course, MEC was not a party. And that would violate our due process rights to be present and meet evidence and perhaps rebut the evidence with our own or through cross-examination.

I would echo what Mr. Pluta said. Mr. Agathen is certainly welcome to cite that in his brief, but it cannot go into the record of evidence as evidence without implicating our due process rights. And frankly now that I've had a chance to see what it says, it's completely duplicative of what this witness has already testified to today. So it seems to me to be an unreasonable due process risk for no evidentiary benefit.

JUDGE DIPPELL: Are there any other objections to these pages which again for the record sake I'm going to go ahead and mark as Exhibit 304. Are there any other objections? I don't hear any. I am not inclined

1	to have the witness read in partial Reports and Orders.
2	However, this is a Report and Order in a somewhat
3	related case. And so while I will not admit or allow
4	the witness to read those portions in, I would entertain
5	the idea of taking notice of the entire Report and Order
6	and putting that into the record. Would that be
7	something that MLA would be interested in, Mr. Agathen?
8	MR. AGATHEN: That would be our second choice,
9	Your Honor. We could live with that.
10	JUDGE DIPPELL: Would there be similar
11	objections to the Commission taking administrative
12	notice of the entire Report and Order?
13	MS. WHIPPLE: Yes. For MEC, we would renew
14	our objections in their entirety.
15	MR. PLUTA: Grain Belt would join in that
16	objection. Mr. Agathen is free to cite to these Reports
17	and Orders in his briefing, but I don't see the
18	relevance of putting this in evidence.
19	JUDGE DIPPELL: Well, I think in order for the
20	record to be clear to the appeals court, and I'm
21	assuming the appeals court may see this Report and Order
22	from this hearing, but in case they do I'm going to take
23	official notice of the Report and Order in EA-2014-0207,

25

and I know I have some pending requests to take official

notice of some other items and I will promise you all a

- 1 | ruling on those items tomorrow.
- 2 MR. WILLIAMS: Judge, for the record Public
- 3 Counsel does not object to you taking official notice of
- 4 | this particular Report and Order.
- 5 JUDGE DIPPELL: Thank you, Mr. Williams.
- 6 Okay. With that being said, do you have additional
- 7 | questions for this witness, Mr. Agathen?
- 8 MR. AGATHEN: I'm almost done here, Judge.
- 9 do have one other document I want to give to the
- 10 | witness. It's a three-page document entitled Economic
- 11 | Impact Analysis for Sapphire Sky Wind Farm in McLean
- 12 | County, Illinois.
- 13 BY MR. AGATHEN:
- 14 Q. Dr. Loomis, do you recognize the document?
- MS. WHIPPLE: Just one moment, please. Some
- 16 of us haven't even seen the document. I don't know if
- 17 | we need to object or not. I know I don't recognize
- 18 | anything called Sapphire Sky Wind Farm in McLean County,
- 19 | Illinois. I don't know if that's another legal
- 20 | proceeding. If we could just have a minute to at least
- 21 | see it.
- 22 JUDGE DIPPELL: That's fine. Mr. Agathen, I
- 23 | assume you have only those copies that you gave the
- 24 witness.
- MR. AGATHEN: That's correct, Your Honor.

JUDGE DIPPELL: Are you intending to offer this as evidence or are you just going to question the witness with it?

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

25

MR. AGATHEN: I'm going to ask him to read in a portion of the document. I'm not going to offer it in evidence.

MS. WHIPPLE: But Your Honor, if he reads in from the document, it is then part of the record of evidence. So I do ask for the opportunity to at least see it and understand where it's coming from.

JUDGE DIPPELL: Yes, we can take some time for everyone to look at that.

Your Honor, Mr. Agathen's MR. PLUTA: representation of what this document is is a little imprecise. This is a document entitled Economic Impact Analysis for Sapphire Sky Wind Farm in McClean County, The second page of it appears to be the first Illinois. page of an Executive Summary. It's completely unclear whether or not there's another page of the Executive Then the last page is page 29 of the report. Summary. So this isn't even at all a complete representation of the document. So I've never seen this before. So I'm going to have a hard time defending my witness on the contents of the excerpt given that's it's just an excerpt and there are no other copies being presented

1	and it violates the rule of completeness. I'm passing
2	the exhibit around so that others have an opportunity to
3	review.
4	MR. AGATHEN: Your Honor, I apologize for not
5	having enough copies for all the attorneys in the room.
6	I thought we had, and this is probably my
7	misunderstanding, established in the first day that I
8	had to have a copy for the witness and for the attorney
9	when I tried to get by with just a copy for the witness.
10	JUDGE DIPPELL: Unfortunately, Mr. Agathen, we
11	need copies for the attorneys and for the bench so that
12	we can all be aware of what's going on.
13	MR. AGATHEN: I apologize. I thought that was
14	just for exhibits that were going to be offered in
15	evidence.
16	JUDGE DIPPELL: Well, in this case it's kind
17	of semantics as to whether you're offering this document
18	or not, but we'll take a minute, let the attorneys look
19	at it.
20	MS. WHIPPLE: Your Honor, while other
21	attorneys are reading, MEC is content to place its
22	objections if you would care to hear them at this time.
23	JUDGE DIPPELL: Sure, go ahead.
24	MS. WHIPPLE: We join in the Grain Belt



objections in that this document, although the first

2.2

page of it appears to be a document that at one point
was authored by this witness, it is a woefully
incomplete document, and the highlighted portion that
Mr. Agathen has indicated he wishes to have read into
the record of evidence is not even a complete paragraph
much less a complete section so that one can take it
into context. And obviously none of us, you know, were
part of that particular proceeding. I can't tell if
that was litigation but certainly MEC was not a party
and so we would raise due process concerns as well as
completeness, the rule of completeness.

JUDGE DIPPELL: Does anyone else that's had an opportunity to look at it have an objection at this point?

MR. ELLINGER: Judge, on behalf of Associated Industries, we would join in MEC and Grain Belt's objection. It's an entirely incomplete document and it's impossible to even inquire of the witness as to what else is in it without being able to see the full document. We're deprived of our right to cross-examine the witness on this document. So we would object.

JUDGE DIPPELL: Has everyone had an opportunity to at least review that? Okay. I am not again inclined to let the witness read in part of a report, an incomplete report. So I guess those

Page 744

- objections are sustained. However, Mr. Agathen, you are more than welcome to question this expert witness about other writings and items that he has authored.
- 4 MR. AGATHEN: I've run out of documents, 5 Judge.

9

10

11

15

16

- JUDGE DIPPELL: Well, I mean, you're free to question him about that document is what I'm saying.

 They'll make any objections as they go.
 - MR. AGATHEN: The only question I would have is is this what you said in your document and obviously you've already ruled on that.
- JUDGE DIPPELL: I guess some explanation as to what the document is on the record might be helpful.

 BY MR. AGATHEN:
 - Q. Okay, Doctor, could you explain what that document is?
- 17 It appears to be a report that I authored. It's dated February 2021. It's titled the Economic 18 19 Impact Analysis for the Sapphire Sky Wind Farm in 20 McClean County, Illinois. I believe this was prepared as part of a permitting hearing, or was filed and that's 21 2.2 why it's public, permitting hearing in McClean County to 23 obtain special use permits to build the Sapphire Sky 24 Wind Farm.
 - MR. AGATHEN: Is that sufficient, Judge?



Page 745

JUDGE DIPPELL: Well, that helps me, yes. I think that at least makes the record clear as to what we were talking about. I think for clarity of the record again then I will mark that as Exhibit 305. Just even though it's not admitted, it will be at least preserved in the record. If you could give that copy to the court reporter, that would be appreciated. Did you have other questions, Mr. Agathen?

MR. AGATHEN: I do not, Judge. Thank you.

JUDGE DIPPELL: Are there questions from the Agriculture Associations?

MR. HADEN: With fear and trembling, Judge, there are. Just a few, I think.

CROSS-EXAMINATION

BY MR. HADEN:

2.2

Q. And I'm looking at this study. I'm just trying to make sure I understand some of the methodology because I'm a little unclear on it. I'm talking about now your Schedule DL-2 and I think, I don't know, if we have to go back to your direct testimony we will, but I think I can work through this and kind of constrain this to this document. The first thing I wanted to ask you about is, and I want to find it, I just had it, I believe, confirm for me if I'm wrong on this, but I believe your study used 2020 data in its entirety as



- part of its methodology; is that correct? I'm looking at page 7. I found it here. Page 7, under 4.1 IMPLAN, that first sentence in that paragraph talks about using 2020 data?
 - A. That's correct. That was the latest IMPLAN data that was available at the time that I did the report.
 - Q. Okay. And 2020 was an atypical economic year for this country, correct?
 - A. That is correct.

2.2

- Q. So do you have any concerns that 2020 created an accurate artifact being effects within your conclusion due to it being an atypical economic year?
- A. There was the tradeoff between using the latest data available, which is usually a best practice and saying is there, you know, a problem with 2020 because of COVID and things, and I did opt to go with the latest data available rather than my other alternative at that point when authoring the report was to use 2019 data.
- Q. For your own -- Just for your own reference, did you ever run your 2020 data that's in the report that's in front of us against 2019 or 2018 data to see if you got different results?
- 25 A. No, I did not.



- Q. Okay. And so I want to make sure I understand. Some of your numbers here are projecting gross job growth from this Project, correct?
 - A. Say that phrase again. Gross job growth?
 - O. Right.
 - A. Yes.

2.2

- Q. Okay. And so I guess that's what I'm concerned about, just so I'm clear, you're projecting into the out years over the top of 2020 numbers when we had suppressed, I guess it's a fact, I'm assuming a fact not in evidence, but I think we all know we had fewer people working in 2020 and your charts will bear that out for regulatory reasons induced by the pandemic. Is that going to inflate the numbers and inflate the economic benefit that you're going to find from this Project by using 2020 numbers?
 - A. When you're using the IMPLAN data, really IMPLAN is an input/output model that's taking different sectors of the economy and measuring how they're related to one another, those cross industry relationships. So I'm not concerned with that in the sense of, you know, kind of overinflating the numbers as you've stated.
 - Q. Okay. So going back then to page 5 in your report. This is still -- I know I keep saying your report. If you want me to call it something different,



- let me know. This is DL-2 that I'm talking about.
 - A. Uh-huh.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

- Q. Your analysis I guess is what it's called in the top page. On page 5 you show charts there, for example, that very first chart shows total employment 2010 to 2020 in Missouri, correct, Figure 3.2?
- A. Yeah, this is just the table of contents rather than the actual figure.
- Q. Okay. Couple questions about that. That is -- That's employment based on absolute numbers, first of all, correct? I mean, by that I mean absolute individuals involved in employment on page 5, is that what that number shows on that chart in 3.2?
- A. So if we turn to the actual page, I believe it's page 10 of 27, you can see the total employment numbers. At the bottom of Figure 3.2, it lists the source which is the Bureau of Economic Analysis to provide those numbers from 2010 to 2020.
- Q. I'm looking at page 10 here. What does your page 10 say at the top? Are you looking at the red numbering in the bottom right?
 - A. I am.
- Q. I'm sorry. I'm looking at your page numbering at the top. That's why we're sideways here.
- A. Okay. Thank you. We're together now.



Q. Okay.

1

8

15

16

17

18

- 2 A. On page 5, yes.
- Q. For ease here because it is the record and I
 apologize, let's use those red numbers at the bottom.

 So really page -- what I was referring to as page 10 is
 page 15 of 27. You're on page 10 of 27?
- 7 A. Yes.
 - Q. Great. Just a second. Let me find that.
- 9 A. We are on the same page.
- Q. We are on the same page. That was page 5.

 That's what I meant. All right. Sorry. So going back to that chart then, Figure 3.2, page 10 of 27 for the exhibit. That is an absolute employment number, not an employment or unemployment percentage number, correct?
 - A. Right, that's total employment, total number of employees, total employment.
 - Q. Do you know as you sit here today whether that number has gone back up since 2020 in Missouri?
 - A. I can't say for sure.
- Q. Do you think it probably has?
- 21 A. I think it probably has.
- Q. Do you know what the unemployment percentage is in Missouri today?
- 24 A. No, I don't.
- 25 Q. Do you know what would be considered full



employment for Missouri like as an economist thinking about that term?

- Α. That is a subject of lots of controversy within economics because when I was in grad school, we would have said yes, where we're currently at would be full employment, but what's different now is things that are happening in labor force participation, so taking workers that were out of the workforce and were not economists or not exactly sure why, and so when you look at an unemployment rate, it assumes the denominator is people who are looking for employment and doesn't take into account directly that labor force participation rate where you say gee, if it's attractive enough or conditions are right, they slide into the workforce or they slide out of the workforce. So that measure of unemployment hasn't been as reliable as we used to think about it when I was in grad school.
- Q. And maybe it's a different subject for today. I know unemployment, underemployment, all those kinds of things can be tricky concepts. I guess for purposes of what we're talking about today though, are we closer to full employment statistically in Missouri or even in the regional Midwest than we were in 2020?
 - A. Yes.

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

Q. Okay. And the reason I ask I thought I saw, I

2.2

- honestly don't know exactly where it is here, so correct
 me if I'm wrong, but I thought I saw one of your
 discussions in here about, you know, I think actually it
 was in your surrebuttal, there was criticisms that you
 don't account for tradeoffs but you're saying well, we
 think idle resources will be used. I understand that
 can be employment, that can be natural resources.

 There's a lot of different things that can go into that.
 As it relates to employment, I mean, are we at the point
 where in a tight labor market where there's anything
 else to give in terms of available work relative to wage
 for purposes of what you're looking at in your report?
 - A. I think that labor force participation rate is one of those things to look at. When we look at that unemployment statistic, we're looking at people who are actively looking for employment. So there could be people that would move, who aren't counted there, aren't in the labor force as counted by government statistics; but given changes and those changes could be, you know, the ability to work remote, higher wages, a whole host of things could shift people that are not in the labor force into the labor force.
 - Q. How does the IMPLAN model though, I mean, how does it account for that?
 - A. So I think what you're saying, as we looked at

2.2

Page 752

the, you know, Figure 3.2 and the downturn in 2020, is
to say will that give you a false starting point so that
you're projecting more jobs because your starting point
is 2020. If you were doing this kind of as a time
series analysis, that would be very worrisome. But the
way that the IMPLAN model works is to say that if you
invest a million dollars in industry segment, or you
spend rather, you know, so I'm going to spend a million
dollars on wire, steel structures and things, what is
the interindustry relationship for that. So the
structure company is then going to have to buy steel and
then that will increase demand for steel. They're going
to So you're looking at all their supply chain
impacts. So those interrelationships, it is a snapshot
in time as opposed to a time series analysis.

Q. I guess to ask the ultimate question, and we may have to come back to it, but I mean, we all understand what we're here for, Company said you do an analysis, you've given your professional opinion about the economic impact, but is this -- do you still believe, I mean, because now it's three years from that data as we sit here today, two and a half, do you still believe this is reliably predictive of future outcomes to the best that you can project it in light of the atypical nature of 2020 for the economy in general?



A. Yes, I do.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

19

20

21

2.2

23

- Q. So you don't think that the fact that you use 2020 -- I just want to be clear. You don't think it really makes a difference whether you use 2020 versus 2019 data to your overall conclusions?
- A. I can't say positively for sure, because I did not run the 2019 data and do that analysis. But I made that as a professional judgment that it was better to use the 2020 data than the 2019 data in my analysis.
- Q. Okay. I want to ask you just quickly on what is going to be read number page 11 out of 27 for that same DL-2 schedule. Figure 3.4 says median household income for the same time scale 2010 to 2020. Those are nominal numbers, not inflation adjusted numbers, correct?
- 16 A. Yes.
- Q. Okay. Is that nominal number higher now than it was in 2020 for Missouri?
 - A. I don't know for sure. I haven't looked at the 2021 data.
 - Q. It was -- I mean, by this chart it was higher in 2018 and even some in 2019 than in 2020, although 2019 is kind of an odd drop there; is that right?
 - A. Yeah. 2019 is lower than 2018.
- Q. Okay. Same thing then on Figure 3.5 Realgy DP

- for Missouri. I mean, that shows a marked drop from 2019 into 2020, correct?
 - A. Correct.

- Q. That state of affairs you don't think makes as between 2019 and 2020 data being -- well, tell me if you agree. It's a pretty unique set of facts for 2020, correct?
 - A. Correct.
- Q. And so that unique set of economic facts, still same answer, it doesn't make any overall impact on your conclusions for this study?
 - A. I still stand by the results of the study.
- Q. I understand. I'm not saying your results are inaccurate using 2020 data. I'm saying the fact -- it was the fact that 2020 was very unusual, does that reduce the predictive power of your report forward looking? That's ultimately what their study does, right?
 - A. We are making, right, we're making predictions of those economic impacts for future investment.
- Q. So you don't think though that the unique circumstances cause a severe drop in Missouri's real GDP in 2020 from the pandemic undercuts at all the accuracy or predictive power of the report forward looking; is that right?



A. No, I feel that this is reliable to the best of our ability to understand.

2.2

- Q. How does real GDP, and maybe it doesn't because I know this isn't a preliminary kind of warmup here data, but how does it factor into IMPLAN? What effect does it have on it?
- A. IMPLAN is taking all kinds of economic data to feed in and that's why it's always a year in arrears. So the 2020 data didn't come out until November of 2021. So you get, you know, a full year's lag before you get the next year, you know, data coming out because it's a massive data collection effort. So when we compare this real gross domestic product number, the GDP number is comparable in my results to the output number. So I have three main results I've got: Jobs, earnings and output. Output is a measure of like GDP.
- Q. Okay. Let's look at page then, maybe we're going to look at this backwards, that may help me a little bit. On page 15 of 27 for that Schedule DL-2, that chart at the bottom ties to total employment impact, the projections on that. And I want to talk first about the direct construction total employment impact. Let's just take Audrain County for an example. I'll tell you I grew up literally in Audrain-Callaway line. Our farm split those lines. I went to high



- school in Mexico, which is the county seat, so I'm very familiar with this as a real world place. The direct -- Based on your assumptions, I think what it's saying is that you're projecting that it will create 100 jobs over three years in Audrain County, correct?
 - A. 100 jobs over, yes, the three-year period.
 - Q. And just so I'm clear then in the real world does that mean that there might be 20 the first year, 50 the second year and 30 more the last year? Is that how you do -- How do you get to 100? It's not 100 people working all at once, correct?
- 12 A. That's correct. It's full-time equivalents,
 13 FTEs. So you can normalize for part-time workers.
 - Q. Right.

2

3

4

5

6

7

8

9

10

11

14

15

16

17

18

19

20

21

2.2

- A. And these are short-term effects because it's only during construction.
- Q. So annualized, assuming you had even distribution of the number, which I know you may not in the real world, assuming you did, that's really 33-1/3 jobs in any given year?
 - A. That's correct.
- Q. It's not 100 jobs all at once?
- 23 A. Yes.
- Q. The one reason I ask is high school there has about 200 kids. So if you took every, let's just say



every able bodied male, it wouldn't be in the modern
world, but just for the sake of being half, they're not
all going to step out of high school and theoretically,
I mean, it wouldn't be the same way, but let's say
that's the workforce you needed. They wouldn't all step
out and have a job the day they graduated. It would be
33-1/3 of them would have a job?

- A. That's correct.
- Q. When you talk about that being local, what do you mean by local? It means literally it's going to be people that live in the county?
- A. That was our assumption that they would be hired locally along the construction route.
- Q. And that's the assumption in each of these counties then?
 - A. That's correct.
- Q. They're going to use a local crew in every one of these counties to build the tower is the assumption?
- 19 A. Yes.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

20

21

2.2

23

24

- Q. Is there any reason to believe that's actually how they'll do it?
- A. The work will be done in that county. The question of who does that work within that county, it could be that they hire, you know, local contractors but that's going to be up to the local practices of the



company that's actually doing the construction.

- Q. Okay. But this makes a big difference, doesn't it make a big difference in the underlying economy of the county as to whether they actually hire a local team of people that live there versus have the work done and then they leave? Does that make a difference in your analysis?
 - A. That will make a difference.
- Q. So if Invenergy hires like a crack team of tower putter-uppers, whatever you call these guys who construct towers, and they come in from Utah or Texas or wherever, they roll kind of like the wheat harvest all the way across the state, put this thing up, looks great and they go home as opposed to they hire this annualized 33 people of literally everybody that lives in Audrain County, we can look at their driver's license, doesn't that make a difference to the underlying analysis for the state's economy?
- A. Depending on where those people live, reside, who gets actually hired on the project, yes.
- Q. Okay. To your knowledge, does Invenergy have any binding agreement in place where they would have to use local crews? I mean, it could a union contract or whatever. I mean, to your knowledge, do they have anything says when you do construction in Audrain County

- you're going to hire local people and you're going to have that 33.3 every year out there building this thing?
 - A. I wouldn't be privy to that information --
 - Q. That's fair.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

- A. -- as an outside consultant.
- Q. They didn't tell you that's the way they're doing it though?
 - A. They did not give me any information that they have a union contract as proof that it will be local people in each county.
- Q. Right. So they could just as easily for what you know use completely out-of-state labor to come in and do this, right?
- A. That was not what I was told that they were going to do when I made the assumptions for the model.
- Q. That's fair. What did they tell you they were going to do?
 - A. That they would hire local.
- Q. That was the assumption they had you working on?
- 21 A. Yes.
- Q. If that turns out to not be true, does that
 mean your underlying report would have less predictive
 power and be less accurate?
- 25 A. So that's going to affect the direct jobs



- because those are the effects of those construction workers and others. But you also have to remember an important part when we're talking about jobs during, this is really jobs during construction. And to simplify the analysis, this includes all of the expenditures that Invenergy makes up until the point that it's operational. Okay. So you look at construction and you're thinking people climbing the poles. But the cost to Invenergy is going to be attorneys, local land agents that are signing up people, it's going to be, you know, financial people, accounting people, all of that is in, you know, the direct jobs so it's --
 - Q. And I understand.

- A. So that 33-1/3 is not just saying oh, that's the guy pouring concrete or stringing the --
- Q. Fair enough. I understand it's a rough proxy for a lot of different jobs, blue collar, white collar, pink collar jobs, all that. I mean, this week we're really zinging the meter on the lawyer side. So at least for Cole County we're killing it. So as it ties then to -- and I understand down the chain even to indirect jobs, induced jobs, I think I understand generally what you're saying there, but I just want to make sure I understand the assumptions, because we had a

Page 761

- lot of talk this week about assumptions, of course, with modeling, how likely are these assumptions to be true.

 And so -- I mean even -- let's take Audrain -- it doesn't -- you can take any of these counties. Audrain happens to be first alphabetically and is the one I know the best. You know, you're talking about lawyers and accountants but you'd have to have, let's say that's what it was, you'd have to have those kind of white collar professionals available in Audrain County or
- 11 A. Right.

Q. So those jobs don't really inure to the benefit or within Audrain County. They might enure in Boone County down the road where Columbia is. We've got more lawyers there, whatever it may be. But it's not really in Audrain County, right?

they're not there to hire to begin with, correct?

- A. So that's one of the beauties of the IMPLAN modeling software. It does two things for you within the software. So for example, let's say that there are just hypothetically there are no construction workers in the county. We know that that's false. There's always going to be some type of construction worker.
- Let's assume that there is no industry, there is no, you know, construction firm in that county.

 IMPLAN will not assume. It won't force in to say no,

- no, you said you were going to spend money on construction. It knows that there is no construction industry in this county to be had and therefore there's no employees and therefore there's no effect.
- Q. Okay. So the bottom line is though during construction phase in the real world when we go forward if IMPLAN is right, we ought to be able to take a three-year slice of the pie and find 100 people in the real world that were an FTE on this project?
 - A. Yes.

2.2

- Q. Right? I mean, I just want to make sure that's what it's telling us.
 - A. Yes.
 - Q. 100 real world people?
- A. So you would be able to measure that only on the direct side because when you get into the indirect side, those jobs tend to be hidden, right, because it's the wherever you bought the structures from and things and we did take care not to say that 100 percent of the -- where the structures are going to be sourced and all those different items that are there, but those are hidden, you're not going to be able to, you know, count individuals on a worksite.
- Q. Right. And I get that. Right now we're just talking about direct and it may not be on the worksite.



2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

- But it's still in any given year averaged out you ought to be able to find 33, between 33 and 34 people that have an FTE that are FTEs tied directly to the connection of construction of this project?
- A. Yeah. And this again, you know, if we were to look I did make, you know, assumptions here and it's spread out. I would imagine that if you're doing a construction project, all of the construction in one county, you are going to move, the question becomes, as you build the line, the question is what crew, where are the residences of the crews that are going to be doing the work and the work takes place in Audrain County.
- Ο. Here's the reason I'm skeptical in the real world, a little skeptical frankly. In the real world 35 jobs in that county is a lot of jobs. And you work at Illinois State, you work in the rural Midwest, so you know any of these towns in the rural Midwest, Mexico is a relatively large county seat and was at one time a relatively prosperous small town, kind of big small town for Missouri. Some of these other counties, I mean, you go there and you feel like there's nothing that's happening. So in Caldwell County, 122 people, 122 jobs, that's going to annualize out to 40 a year, something like that if you did it that way. 40 jobs is exceedingly noticeable in that county. So you're going

Page 764

- to say during construction you think you're going to get that kind of kick in local employment where you say wow, we've got all got these jobs, where are all these people coming from?
 - A. I think you're making my case.

- Q. No, I'm asking you is that going to happen? If that happens, we'll be excited.
- A. Again, you go back to this is a, well, over time, you know, this is a very, very large project with very large numbers of investment and things. I could ask the opposite question to say how can you not hire local people, how can you not help but have a huge economic impact. It does not -- I agree with you. I live in a rural county in central Illinois. I see lots of counties that are just, as you say, and I say making this size of an investment is going to have a noticeable impact in the local community.
- Q. I guess, Doctor, let me posit then respectfully what, because you've asked the question, the complaint I think a lot of us here, for example, a major infrastructure project came through a very similar area, the last pipeline, and maybe they're wrong but the constant complaint is look, they rolled through a team of out-of-state guys, they ate in the cafe for six months while they did this, they bought a lot of liquor,

Page 765

- if we could have taxed crystal meth in some of these towns, we would have done great because they came and they went, we didn't, but you know, they came, they went, they had minimal impact, they bought some gas, they went to our convenience stores, they ate in our cafes, they were here and gone in six months and nobody feels like, you know, this county got any richer, meaningfully richer because of this. So what do you say to that sort of critique? Are they just wrong and that these are sublimated effects or what's the story on that?
- A. Yeah, I think there are a lot, as we said, there are a lot of hidden effects that you don't account for, you know, of supplies, materials that are typically purchased locally that also have an effect. And then once this line is built, it's going to be there, it's going to be taxed in the local community, there's going to be services that will be needed, you know, vegetation management and other things. And so those employment impacts, there are employment impacts during construction, but there are also those operations impacts that whereas the ones during construction are short term, the ones during operations are permanent ongoing jobs.
 - Q. So I guess I think vegetation management is a



- Page 766 1 great example actually to discuss or ask you about. 2 Some maybe not opportunity cost but just tradeouts, 3 neutral tradeouts. So on the economic activity side for 4 vegetative management you would put things like, for 5 example, buying herbicide at the local wherever, local 6 co-op, at the local Orscheln, it's a farm home store, a 7 place like that, correct? 8 Yeah, I can't say for sure where they source 9 the --10 JUDGE DIPPELL: Dr. Loomis, can I get you to 11 get a little closer to the microphone. THE WITNESS: Sure.
- 12
- 13 JUDGE DIPPELL: Thank you.
- 14 Thank you. THE WITNESS:
- 15 BY MR. HADEN:

17

18

19

20

21

2.2

23

24

- Would that be an example though of the sort of 0. input that you would be able to come in on the input side as a net plus for the economy?
- It's purchasing at the local level and Α. Right. typically we would assume things and materials especially that would be, you know, hard to transport over a long distance that you'd say oh, gee, I definitely have to get this locally.
- Right. They go by and they buy the 5-gallon Ο. bucket of Roundup to spray the poles as an example.



2.2

- Now, if the farmer was spraying all that the year before anyway, he was buying from the same place, your study I think you told Paul, I want to make sure I'm right on this, you're telling us hey, the Company is going to come in and buy herbicide and spray these poles, and that's great and you reflect that economic activity, but you don't talk about the way that balance is off against the fact the farmer might have bought it anyway and done the same thing, correct?
 - A. Why is the farmer not buying it?
- Q. He's not buying it to spray where the pole is because he doesn't farm there any more.
 - A. But why does the store not buy -- why do they not sell two 5-gallon buckets? They sell one to there and one to the farmer.
 - Q. This is the question about grosses and nets because I thought what you told Paul was we're showing you what we can definitely quantify and say is going to happen but we're not attempting to show that in a net sense against any offset or other lost activity on the other side; is that correct?
 - A. We are not taking those losses, but I think your example is a different one than what I understood the questioning was before.
 - Q. Okay. I guess here's the bottom line question

- I think for I guess what I'm trying to figure out because of the inquiry we've got here for our Tartan Factors. Are any of these counties actually going to be better off economically or richer for having had this happen, for having had this Project come through?
 - A. Yes.

- Q. Okay. And how much richer? I mean, give me a county. Give me an example if that's too general of a question but how much richer?
- A. How do you define rich? You know, as an economist, this might not satisfy the general public. The broadest measure of economic impact is economic output. That's the value of goods and services produced within that area. So to give you the example that you did of the herbicide is a perfect example. The amount of economic impact that IMPLAN attributes to that herbicide is only the retail margin of that store that sells it. Let's assume that that's Monsanto produces Roundup. Let's just say that it does.
 - Q. They do.
- A. So the store only makes money on the markup that they make to that herbicide and the rest of the money, so they receive it from whoever, and then they turn around and they have to buy it wholesale or to a manufacturer and the economic impact is found where that

herbicide is manufactured, certainly there's a retail margin that that store gets but that's the only impact to that county is that kind of markup.

1

2

3

23

24

- 4 And that's fine, but what I'm also --Ο. Okay. 5 I'm still asking though about Use A versus Use B. 6 you had nine acres of farmland that had to be sprayed. 7 You've got nine acres worth of Roundup somebody has got 8 to buy long before, let's say long before the Company 9 showed up. After the fact you still have nine acres 10 that have to be sprayed. Now maybe by a different 11 person but it doesn't require any more Roundup to do it. 12 So what that looks like to a laymen, and tell me why I'm 13 wrong, but it's at the retail level. I know it's never 14 going to be perfect. You're right, one guy you might 15 end up selling two buckets and some people waste it, 16 whatever the case may be, it's complicated at every 17 individual example. But in general as to the economic 18 activity of the county whether the farmer comes in and 19 buys it and sprays it or the Company comes in and 20 sprays, the retail impact regardless of who buys it will 21 be identical, correct? For the margin within IMPLAN 2.2 even it would be identical, wouldn't it?
 - A. I'm still lost on why they don't sell two buckets. Why is it a zero-sum game and that that bucket that the farmer has -- they don't order another bucket



and sell two buckets so now it's an additive.

Q. Normally you'd spray on a per acre basis. I'm just giving a real world example I know about. You're going to spray on a per acre basis. The farmer has fewer acres to spray, he will buy less Roundup because chemical is expensive. So he used to have ten acres to spray. Invenergy took an acre, put poles on it. It's now their problem to spray I guess to your point. But it's no longer his problem to spray.

MR. PLUTA: I'm going to object. I do understand that we're trying to work off of hypotheticals here, but we're building in a lot of assumptions that are not in evidence about how vegetation management will be handled. Previously we dealt with how Grain Belt is going to hire crews even though there's no evidence and testimony that states that they're going to be from out of state. You're trying to make your point. You've gone pretty far here.

MR. HADEN: Judge, I guess I will vociferously object to the Company trying to shut down legitimate cross-examination that is not, A, is not rude or abuse of this witness, B, is completely based like real world examples, and C, is absolutely critical to several of the Tartan Factors. I understand our cross here is a little messy because I'm trying to move this along but

2.2

Page 771

these are all legitimate and fair questions. They've
brought this doctor here to tell this Commission that
there's all sorts of economic upside to this activity
but then when we ask the hard questions about how much
net economic activity does it generate, we can't get a
straight answer. That's a fair thing for a party in the
case to ask and for the Commission to hear about. I
don't understand the objection. I guess I don't
understand exactly what the question the objection is
legally but also as to relevance if there is a relevance
objection in there. These are clearly relevant
questions that, I mean, I'm just doing my best to try to
figure out the underlying assumptions in the model. I
think what the Company I'm sorry. Just one more. I
think what the Company is asking us to do is just take
all this at face value and not ask any critical
questions.

MR. PLUTA: It's foundation. It's to foundation and the argumentative nature of the question. There isn't any testimony that supports your underlying based assumptions to your questions. So it's a mixture of testimony that you're giving yourself or stuff that's just completely hypothetical that's not based in testimony from any other party to this case or your witness or any witness that I think is planning to



1 testify.

2.2

MR. HADEN: All right. I guess whatever the last question was you objected to, do you know what it was?

MR. PLUTA: You're talking about vegetation management.

MR. HADEN: I'll lay foundation. It's going to be slow if that's what we want to do. It's going to take a minute if that's the case, and I think they are fair questions. I mean, if they're going to present this as the definitive study that we're all supposed to take to hear about how great the Company is, then it's fair to ask about the methodology used to arrive at that conclusion.

JUDGE DIPPELL: Okay. His first objection was assuming facts not in evidence, which I will sustain. Here's the deal. You need to ask your questions and the witness needs to answer the questions, but we need to have less conversation between you and the witness. Okay? So you ask some clear questions and, Dr. Loomis, I'll ask you to give as clear and concise an answer as you can. And if you feel you need to explain, your attorney can get that explanation on redirect. So let's all try to reel it in and get this job done.

MR. HADEN: I can be more formal, Judge, in my

- 1 | approach and I will be.
- 2 JUDGE DIPPELL: Thank you.
- 3 | BY MR. HADEN:

9

10

11

12

13

14

15

16

17

- Q. Okay. Let's talk about indirect indirect then. Indirect in your, that's a different category.

 What is indirect according to your testimony as it applies to employment? Sorry.
 - A. So these would be supply chain impacts that result from materials, equipment and services that the Company purchases.
 - Q. Okay. And on the indirect side -- well, let me ask this. Let me go back and ask on direct. So direct total employment impacts, when you're looking at Table 5.1 at the bottom of your page 15 generally, there's all those counties listed there, but I assume you use the same methodology to calculate each of those through IMPLAN, correct?
 - A. That's correct.
- Q. Okay. So generally for any one of those, did you account for any negative direct effects on employment from the Project?
- 22 A. Negative direct effects?
- Q. Right.
- A. Could you give me an example of those?
- Q. So for example, well, I guess is there such a

thing as far as a definition that you would work with?

2.2

- A. You could net out the direct effects if you think that there's something else that will be, you know, replacing this; but within this framework itself, the Company makes an investment, we run that through IMPLAN according to the different, you know, calculations and we get, you know, our jobs impact.
- Q. Does the model account, for example -- well, does the model account for economic activity that cannot go on during construction phase? I mean, for example, farming under the line because dozers have torn the dirt up and you can't farm it. Does it account for that?
- A. We heard testimony earlier that there would be crop damage payments compensating for that.
- Q. I'm sorry. I should have said in the employment context. You're right, there may be money that flows in for it. But in the employment context, so these are jobs that will not be being done because they can't be done. I'm thinking, for example, let me give you an example at the risk of an objection.

I mean, you lose acreage that cannot be farmed because it's been dozed and so somebody lays off a farmhand, they just don't have the work that year.

MR. PLUTA: Objection. There's no foundation that's been laid to suggest that workers will be fired

- 1 | because the Grain Belt line is being constructed.
- JUDGE DIPPELL: Overruled. Okay. You can ask that.
- 4 BY MR. HADEN:

2.2

- Q. Okay. So there's ground that can't be farmed because the construction activity is going on. The farmhand gets laid off because there's less to do. That would be a negative direct impact on a direct type job from the construction or would you consider that to be an indirect effect?
- A. It does get confusing on what is a direct and indirect effect. I think it's very clear when you're looking at it from Grain Belt Express. I'm building the line, and so forth. It does indeed get messier when you say where does that farmhand who got laid off in this hypothetical, is that a direct impact, is it an indirect impact, where does that fall we say somebody has lost a job.
- Q. I guess more importantly does IMPLAN account for that sort of phenomenon which I would posit is entirely realistic. I know they may say there's no foundation, but does IMPLAN account for that, the modeling that you use? Does it account for that sort of phenomenon in terms of giving an overall picture of economic activity?



A. No, it's not going to know that a farmhand is laid off because crops got bulldozed. There's no way for IMPLAN to do that.

2.2

- Q. But it does know that somebody got hired that posits that somebody will be hired to build the project?
- A. Because it sees in an industry sector that millions of dollars is being spent in this sector and that million dollars of expenditure equates to a certain number of jobs.
- Q. Okay. But it doesn't show the loss of dollars being spent then for the converse scenario we just talked about or any scenario where dollars don't get spent for some alternative reason; is that right?
- A. Again, I'm not sure that those exist apart from the hypothetical.
- Q. Who designed the IMPLAN methodology? Who actually built it?
- A. IMPLAN was built out of University of
 Minnesota. So it was a group of academics who then
 turned it into a commercial product. I think then it
 got sold because it has moved to North Carolina, but
 it's a tool that's used widely in economic development
 circles. If you went to an economic development -local economic development manager, they would say oh,
 yeah, I know IMPLAN. I use IMPLAN. I use the



Page 777

- multipliers out of the IMPLAN model. So it is not specific to energy modeling. It is general economic development software.
- Q. Okay. Have you ever been personally involved in any sort of post-mortem analysis from an IMPLAN conclusion?
- 7 A. Yes.

1

2

3

4

5

6

8

9

- Q. Where was that?
 - A. That was in Macon County, Illinois.
- O. And what kind of project was it?
- 11 A. It was a wind farm.
- Q. And so did you analyze how accurate IMPLAN had been in analyzing the real world effects?
- 14 A. Yes.
- 15 O. How accurate was it?
- 16 Very accurate given the assumptions. So there Α. 17 was a lawsuit that was given, and so I got records for every worker that worked on the wind farm. 18 I got 19 records from what the Company spent after construction 20 on how much did they buy from concrete and rebar, and so 21 The one thing I will say, and it goes to your 22 point, is that when I looked at the records I had 23 concluded that the employment impacts were in Macon 24 What I did not account for is that they did County. 25 indeed hire the local union in Macon County but Macon



2.2

- County's union is not configured by county boundaries. So they hired local. But then once you turn that over to the union workers, they have seniority rules of who gets to work on one project, and so forth, that's completely outside the rules of the, you know, company or control of the company. But the overall impacts, as I could measure, and then also going to your point in terms of IMPLAN, you know, I was able to update the year in which the IMPLAN data was done to the year when it was actually constructed and it was very close. I would say within 5 percent, 10 percent.
- Q. By 5 percent as to what? As to each statistical category?
- A. I don't recall whether I did, you know, each and every, you know, element, so direct, indirect and induced and said each one of those was within 5 percent. But my recollection was that it was the overall totals for all three categories of jobs, earnings, output were within 5, 10 percent of what I had previously estimated.
 - Q. That was for direct impacts, correct?
- A. That was all three, direct, indirect and induced, but I think my recollection was that it was on the total impacts, the total employment impacts, all three added together was within 5 to 10 percent of what I had predicted it would have been.



1	Q. Working backwards, how did you definitively
2	measure induced impacts given how diffuse they are?
3	A. Again, I relied on IMPLAN but more recent
4	data.
5	Q. No, no, I'm not talking in the modeling
6	forward looking. I'm saying in your post-mortem. What
7	I'm talking about is post-mortem. Did you go back and
8	survey in the real world and find out yeah, here's 12
9	jobs, whatever the number was, that got kicked off as
10	induced activity?
11	A. Right.
12	Q. Did you go find those people and interview
13	them and find out?
14	A. No. I again relied on IMPLAN's estimate of
15	the induced impacts.
16	Q. Okay. So this is what I'm asking about. So
17	in that project, you used IMPLAN tell me if this is
18	what you did. Did you use IMPLAN to make a
19	forward-looking prediction in that context or were you
20	only hired in on the back end to say hey, what happened
21	with this project?
22	A. No. I was hired to do a study for permission
23	to permit the wind farm, and that was entered into
24	evidence for the county permitting hearing. So I did it

in advance.

1	Q. This is what I'm asking though. So you did a
2	study prospectively, forward looking, said here's what I
3	think is going to happen like you have today, correct?
4	A. Uh-huh.
5	Q. Okay. And then you went back years later to
6	see whether you were right?
7	A. Right. I got those records of actual
8	expenditures, who actually worked on the project, and so
9	forth.
10	Q. Okay. I get direct. Direct may be easier
11	because you can figure out who worked on the project.
12	I'm curious about indirect and induced, because induced
13	is the most attenuated of the effects, correct?
14	A. Right.
15	Q. It's kind of tertiary effects kicked off by
16	economic activity?
17	A. Uh-huh.
18	Q. To be clear, I'm not doubting those happen
19	that in general those things exist, but I'm asking you
20	how did you go back and measure to see if you were right
21	to the induced effects in that context?
22	A. Right. So what I was able to verify was here
23	are the people who worked on the project, here's how
24	much they earned, so I know the direct numbers with

certainty for that. I then have the -- for the indirect

- impacts I know how much they spent and more importantly where they spent it. So one of the big things would be did they buy local or did they buy, you know, out of county, out of state.
- Q. How did you know that -- And I'm sorry, how did you know that for the direct impact folks where they spent their money?
- A. No, no, I'm saying the Company spent money on concrete and rebar and those things.
- Q. Just so I'm clear, this is not knock-on effects from workers spending their money locally?
 - A. I'm getting to that.

2.2

- Q. Okay. I'm sorry. So the -- So in order to measure the induced impacts, which you're right is derivative to say now people have more income in the economy so they make normal household purchases. They buy groceries, they go to the movie theater, they eat out, and so forth. You're right, I can't measure those. I can't go out and survey and say ah-ha, you did this because it was this construction worker that was working on this project and they bought groceries at the local grocery store and they had to add, you know, an additional cashier because of that. So I did rely on IMPLAN to calculate my induced impacts.
 - Q. So I guess the problem there is if IMPLAN has

flaws, because all economic models have some small flaw, correct?

2.2

- A. They're not going to be absolute certainty. It's a prediction.
- Q. Yeah, I'm not trying to hold you to that. I think we all understand that. But if it had flaws, it's supposed to be predicted but you never calibrate the machine using backward looking data. Then how do you know you're not just getting feedback loops of error within the model?
- A. Because you have to true up the model to government statistics. They have checks and balances in which everything has to add up.
- Q. That's what I'm asking, especially in induced effects where you're telling me it's really not measurable in the real world and you just use IMPLAN to look backward at what IMPLAN said it would do, won't it always tell you that it's the same data?
- A. In the aggregate, you know what employment is at the grocery store and what is in the, you know, restaurants, and so forth. So you have the ability to add those all up and things. What IMPLAN is adding is those interindustry relationships you know that they have to sum up at the end of the day.
 - Q. Okay. I am I promise getting close to

wrapping this up. So just so I'm clear then on these conclusions, I think you've already said in the employment context after three years of construction we should be able to go to any one of these counties and find that annualized number of people saying yep, I was an FTE connected to some kind of work on this project, construction, accounting, whatever. We should be able to find those people, right?

A. Yes.

- Q. Okay. Same thing then with operations, the next category, we ought to be able to go to any one of these counties and find, a lot of these are fractional but the point three FTE that worked in that county and probably three others in any given year for the company. That person should exist. We ought to be able to find the indirect and induced employees down the chain from this project, correct?
- A. Given the assumption in the model, correct.

 JUDGE DIPPELL: And Dr. Loomis, again, if you could get close to the microphone. And Mr. Haden, if you really could get close to the end.
- MR. HADEN: I thought you were going to say get close to the microphone. I thought I was loud enough. I figured that wasn't a problem.

JUDGE DIPPELL: If you can rein it in, we've

gotten pretty far down the rabbit hole.

MR. HADEN: Judge, I understand. I think they're going to rely heavily on this data though on these analyses as it relates to Factor 5 in the Tartan test. I will try to wrap it up.

BY MR. HADEN:

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

- Q. Same thing then on total earnings impact. I mean, we should be able to go to one of these counties and find -- this is what I wanted to ask. Let's just take Audrain again. You've got a number there on the top of your page 17 of 27. Direct construction effects you predict in Audrain County 22 million, almost \$22.8 million, just under. Do you see that?
 - A. Yes.
- Q. Okay. We should be able to go find where \$22.8 million, almost 22.8, 22.7, got spent in Audrain County for the construction of this project, correct?
 - A. Yes.
- Q. Okay. And if we can't find that, if that doesn't happen, this model will have failed. If we're not close, this model will have failed in some sense, correct?
- 23 A. Yes.
- Q. Does that happen sometimes with IMPLAN, to your knowledge?



A. I've only done that one case of the post-mortem and looked back and again it was because I had lots of data and records that I was able to do that.

2.2

- Q. Let me ask that a different way, because you're working this sphere, have you ever had any peer reviewed academic papers that would outline other -- a case, I shouldn't say other because you're saying your case doesn't show a failure, but cases that would show failures in the IMPLAN model to accurately predict economic conditions?
- A. Actually to the contrary. I've published articles on wind and solar that have passed peer reviewed publications that have relied on IMPLAN to predict.
- Q. That's not my question. What I'm saying is have you ever read -- just like in medical studies they say hey, we had a patient come in and die and here's why. Have you ever read one where an academic has said hey, we used IMPLAN and this was an absolute wreck and here's why, or maybe we don't know why, but the model failed to accurately predict generally what was going to happen in terms of economic conditions. Have you read a paper that talked about that ever from any other academic in your field?
 - A. To the contrary there is a paper, not sure if

I cite it in our study here.

Q. Doctor, I'm sorry, because they're hustling me along, I understand there may be papers that say it works but that's not my question. My question is, have you read a paper anywhere that would talk about where IMPLAN failed? If the answer is no, fine. Have you ever read any papers like that? Does anything like that exist?

MR. PLUTA: I'm sorry, Judge Dippell. I need to object. Dr. Loomis needs to be able to answer the question. He was looking for a paper that he wants to cite to as part of his response. I think he has a right to do that.

MR. HADEN: Judge, I guess what I would ask is you direct the witness to make a responsive to my question. I don't think it was, I'm qualifying an answer, my question was is there a paper that says this. He was saying to the contrary there's one that says it works and that's fine. They can ask him that on redirect. But I'm asking about one that says it failed. I think that's a fair question.

JUDGE DIPPELL: I agree the witness can answer the question yes, no, I don't know, I need to look it up.

THE WITNESS: No, I'm not aware of a peer

- reviewed publication that is a case study where IMPLAN failed.
- BY MR. HADEN:

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

- Q. So to your knowledge, IMPLAN works every time?
- A. That's not what I said. I said there -- Your question was is there a peer reviewed publication in which IMPLAN failed and I said no. What I was trying to say before was that there are papers that look at multiple methods to estimate economic impacts, and the conclusion of that paper that I was going to mention is that IMPLAN is one of the best ways to do the estimation that's using input/output methodology that IMPLAN is based on.
 - Q. Are there methodologies that are better?
 - A. That paper -- My recollection of the paper, and it's been a while, is that input/output analysis is the best predictor.
 - MR. HADEN: That's all I have for now, Judge.

 JUDGE DIPPELL: Thank you. Mr. Hollander had
- 20 to leave. Is there anything, Ms. Stemme.
- MS. STEMME: No questions.
- JUDGE DIPPELL: Associated Industries.
- MR. ELLINGER: A couple of very quick ones, I
- 24 promise.
- JUDGE DIPPELL: I've heard promises before



-	
hara	
TICT C :	

6

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

25

- MR. ELLINGER: Trust me, I'm not replicating what happened on the front row. Good afternoon,
- 4 Dr. Loomis.
- 5 THE WITNESS: Good afternoon.

CROSS-EXAMINATION

7 BY MR. ELLINGER:

- Q. I just have a couple very quick questions. In the study that you did, you were not asked to calculate whether new industries would locate in Missouri due to the Project; is that correct?
 - A. That's correct.
- Q. If new industries were to be studied and new industries were to relocate, would that have a positive economic benefit to the state?
- A. Yes. To the extent as I mentioned before that an industry doesn't exist in a county, IMPLAN would assign -- even though there was expenditure, they would assign a zero value for that. If that industry were to move in, then it would add to the economic impacts that are in this study.
- Q. And I believe you testified before and I believe your CV indicates that you've done a lot of writing and research in the areas of utility regulation, et cetera, and economic impact thereof, right?

1 A. Correct.

2

3

4

5

6

7

9

10

- Q. And a better stronger electric distribution and transmission system serves benefits to the industry, is that correct, industry in general?
- A. So industry, not the energy industry but you just mean businesses?
- Q. Yes.
- 8 A. Yes.
 - Q. And you were not asked to quantify those impacts but they would be positive for a better transmission system, correct?
- 12 A. That's correct.
- Q. Similarly, if existing businesses or industries in the footprint were to expand, you were not asked to evaluate that, were you?
- 16 A. No.
- Q. But those would have positive economic effects, correct?
- 19 A. Yes.
- Q. And if there were existing businesses or industries that might leave because of a weak transmission system and chose to stay, you weren't asked to study that, were you?
- 24 A. No.
- 25 Q. But those would have positive economic



1	effects, wouldn't they?
2	A. Yes, they would.
3	Q. So ultimately each of those items whether
4	there were new industries that moved in, existing
5	industries that expanded or existing industries that did
6	not leave, they would all have additional positive
7	economic benefits to the state of Missouri, correct?
8	A. That's correct.
9	MR. ELLINGER: No further questions, Judge.
LO	JUDGE DIPPELL: Thank you. Are there any
L1	questions from the Commissioners? Mr. Chairman.
L2	CHAIRMAN RUPP: Thank you, Judge.
L3	QUESTIONS
L4	BY CHAIRMAN RUPP:
L5	Q. Just wanted to clarify, you had testified that
L6	the economic impact numbers you assumed in your
L7	analysis, you assumed all jobs from the Project would be
L8	Missouri residents?
L9	A. All the jobs, direct jobs during construction,
20	that's correct.
21	CHAIRMAN RUPP: All right. Thank you.
22	JUDGE DIPPELL: Any other Commission questions
23	and Commissioners online, just speak up if you have
24	questions.

No questions, Judge.

COMMISSIONER KOLKMEYER:

	Page 79
1	This is Commissioner Kolkmeyer.
2	JUDGE DIPPELL: Thank you, Commissioner. All
3	right. Is there any further cross-examination based on
4	the Chairman's question, and I'll just throw it out to
5	the group. Not seeing any. Is there redirect?
6	MR. PLUTA: Yes, Your Honor.
7	REDIRECT EXAMINATION
8	BY MR. PLUTA:
9	Q. Dr. Loomis, do you remember during Mr. Haden's
10	questioning regarding IMPLAN's peer review process you
11	were not given the opportunity to respond to find the
12	cited article that spoke about IMPLAN's strengths
13	relative to other models. Would you like to find that
14	to complete the record on that point?
15	A. It's by I'm not sure if I'm pronouncing it
16	right, Grilleches, and I do not see it in my list of
17	references in the report. So I don't think it's in the
18	record.
19	THE STENOGRAPHER: Could you spell that,
20	please.
21	THE WITNESS: G-r-i-l-l-e-c-h-e-s. That's
22	from memory. Subject to check.
23	BY MR. PLUTA:
24	O. Thank vou. Mr. Haden. do vou remember a line

of questioning where Mr. Haden asked you, I believe he

- cited to Table 5.3 which is on page 17.7 of DL-2. I

 don't know the exact number that he cited to but, for

 example, I think he -- let's take the construction

 direct for Audrain County. It lists \$22,793,545. I

 believe Mr. Haden asked you the question if we can't

 find that exact number in the county, has the IMPLAN

 model failed.
 - MR. HADEN: I'm going to object. I think that misstates the question, because I don't think I ever said that exact number ever.
 - MR. PLUTA: I'll make it a more general question if that's helpful.
- MR. HADEN: Fair enough.
- 14 BY MR. PLUTA:

9

10

11

12

15

16

17

18

19

20

21

2.2

23

24

- Q. So Mr. Haden pointed to your numbers and said if we can't find that number, does that mean that the IMPLAN model is a failure. Is it fair to say that in any economic analysis there will be a margin of error?
 - A. Yes.
- Q. And having some margin of error does not necessarily make a model a failure; isn't that correct?
 - A. That's right.
- Q. And there's been a lot of talk about gross economic analysis versus net economic analysis. And I believe Mr. Haden and Mr. Agathen have pointed to



Page 793

- several examples where they believe there could be negative economic outputs. Is it fair to say that you also didn't consider a number of positive economic outputs?
 - A. That's correct.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

18

- Q. Okay. And I know that you handled just a few, but is it true that your report does not include a number of economic benefits that were addressed in Mr. Repsher's analysis?
- A. That's correct.
- Q. Is it also true that your report wouldn't contemplate the benefits that are found in Mr. Monken's analysis of the Project?
 - A. That was the Guidehouse report?
- Q. Converge, the national security report.
- 16 A. That's right. I did not include those 17 benefits.
 - Q. And the same would be true about the Guidehouse report's benefits?
- 20 A. Yes.
- Q. Okay. And so those would all -- To the extent that they created economic benefits, those would not be reflected in the numbers that you have in, say, Table 5.3?
- 25 A. That's correct.



1	Q. Okay. Thank you. Is the measurement of
2	purely gross impacts consistent with industry standards?
3	A. Yes.
4	Q. Okay.
5	MR. HADEN: The answer is here. I will back
6	off my objection. I guess I've got to be faster.
7	BY MR. PLUTA:
8	Q. And I know Mr. Haden was concerned that there
9	are some economic earnings results or labor that would
10	be duplicative of the existing labor, but is there
11	sufficient reason for you to understand and support the
12	assumption that many of the economic inputs and job
13	growth created by this Project are nonduplicative of
14	existing resources?
15	A. Yes.
16	Q. Okay. Do you remember Mr. Agathen asked you a
17	series of questions about deductions from compensation
18	received by workers?
19	A. Yes.
20	Q. And I believe that he mentioned federal income
21	tax and social security taxes?
22	A. Correct.
23	Q. That would be true of any lawful profession,

25

someone's pay?

correct, that there would be that amount taken out of

1 Α. That's right. 2 Thank you, Dr. Loomis. MR. PLUTA: That's all 3 I have. 4 Thank you, Dr. Loomis. JUDGE DIPPELL: Ι 5 believe that concludes your testimony and you may be 6 excused. 7 (Witness excused.) 8 JUDGE DIPPELL: And that brings us to 5:05 and 9 I think it's a good place before we begin with Staff's 10 first witness to take a short break. Let's try to take 11 just a ten-minute break and come back at 5:15. 12 you. Go off the record. 13 (A recess was taken.) 14 JUDGE DIPPELL: All right. We're back on the 15 record. And Ms. Eubanks has already taken the stand. 16 So we'll begin with Staff's witnesses. I will ask her 17 to raise her right hand. Do you solemnly swear or 18 affirm that the testimony you're about to give at this 19 hearing will be the truth? 20 THE WITNESS: I do. 21 JUDGE DIPPELL: Thank you. Mr. Pringle, you 2.2 may go ahead. 23 Thank you, Judge. MR. PRINGLE: 24 CLAIRE EUBANKS, 25 having been first duly sworn, was examined and testified

1 as follow	s:
---------------	----

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

25

DIRECT EXAMINATION

3 BY MR. PRINGLE:

- Q. Ms. Eubanks, will you please state and spell your name for the record?
 - A. Claire Eubanks, C-l-a-i-r-e E-u-b-a-n-k-s.
- Q. Thank you, Ms. Eubanks. By whom are you employed and in what capacity?
- A. I'm employed by the Missouri Public Service Commission as the Manager of the Engineering Analysis Department.
- Q. Did you contribute to Staff's Report in this case which has been previously marked as Exhibit 109?
 - A. I did.
- Q. Did you submit rebuttal testimony in this case which has been previously marked as Exhibit 102?
- A. Yes.
- Q. At this time, do you have any corrections to make to the Staff Report or your rebuttal testimony?
- A. I do. The same change throughout. So start with the Staff Report. This is on page 10 at the very bottom of the page it's to strike the words any all. So the last line would read into easement agreements with Missouri landowners. And then similarly in my testimony on page 8, line 20, the words any all would be struck



1 and it should read to incorporate House Bill 205 into 2 easement agreements with Missouri landowners. 3 MR. SCHULTE: Sorry. I'm catching up. I'm 4 still on page 10. Was it page 10 of the Staff Report? 5 Which is marked as Exhibit JUDGE DIPPELL: 6 109. 7 MR. SCHULTE: I'm sorry. Where on that page was the modification? 8 9 Towards the bottom. MR. PRINGLE: 10 THE WITNESS: I'm looking at the Revised Staff 11 So if it's different page numbering, that might 12 be. 13 Thank you. MR. SCHULTE: 14 Did you get both of those JUDGE DIPPELL: 15 changes, Mr. Schulte? 16 I found the place on the page. MR. SCHULTE: 17 Could you say the modification again? 18 THE WITNESS: Just deleting the words any all. 19 MR. SCHULTE: Got it. 20 THE WITNESS: It's going to be the same change 21 throughout. It's just in three spots. 2.2 MR. SCHULTE: Thank you. 23 JUDGE DIPPELL: I only got two spots myself. 24 THE WITNESS: So one spot is in the Revised 25 Staff Report on page 10, page 8, line 20 and then



- Transcript of Proceedings Page 798 1 finally page 18, line 16, the last two are my rebuttal 2 testimony. 3 JUDGE DIPPELL: Page 18, line 16? 4 THE WITNESS: Yes. 5 JUDGE DIPPELL: Somehow I missed that one. 6 Okay, Mr. Pringle, I think we're all caught up. 7 Thank you, Ms. Eubanks. MR. PRINGLE: BY MR. PRINGLE: 8 9 Besides those corrections, at this time if I Ο. 10 asked you the same questions today within your rebuttal 11 testimony, would your answers be the same? 12 Α. Yes. 13 Are those answers true and correct to the best Ο. 14 of your knowledge and belief?
- 15 Α. Yes.

24

- 16 Thank you, Ms. Eubanks. At this MR. PRINGLE: 17 time I offer into the record Exhibits 102, 102HC and 102 18 HC-C.
- 19 JUDGE DIPPELL: And 109 or are you holding 20 that until later?
- 21 Mr. Stahlman sponsored that MR. PRINGLE: 2.2 report. It will be coming in with him.
 - JUDGE DIPPELL: Would there be any objection to Exhibit 102 which has a highly confidential version and highly confidential-competitive version which I know



	Transcript of Proceedings June 07, 202
1	Page 799 not everyone has access to. Are there any objections?
2	Seeing none, I will admit those.
3	(STAFF EXHIBITS 102, 102HC and 102HC-C WERE
4	RECEIVED INTO EVIDENCE AND MADE A PART OF THIS RECORD.)
5	MR. PRINGLE: Thank you, Judge.
6	BY MR. PRINGLE:
7	Q. And Ms. Eubanks, with those corrections we
8	discussed earlier, what is Staff's current position
9	regarding the HB 2005 recommendation?
LO	A. Staff's current position currently provided no
L1	further changes in other positions. Staff recommends a
L2	condition that let me make sure I'm reading it

13 correctly -- that Grain Belt Express file with the Commission revised landowner protocols to clearly 14 articulate the compensation package offered to landowners by phase and/or line type as modified 17 pursuant to the Commission's decision on Issue 2.

15

16

18

19

20

21

2.2

- Thank you, Ms. Eubanks. 0. Just to be clear, Staff is not recommending the implementation of all HB 2005 at this time, correct?
- Not without -- I guess that's based on the Α. full entirety of Staff's recommended conditions, yes.
- 23 Thank you, Ms. Eubanks. MR. PRINGLE: 24 Dippell, at this time I tender the witness for 25 cross-examination.



1 And just to make things clear JUDGE DIPPELL: 2 for those, the revised positions that Ms. Eubanks is 3 testifying to, those were put in Staff's Revised 4 Position Statement? 5 MR. PRINGLE: Yes, that was filed with our 6 prefiled exhibit list, correct. Thank you. 7 JUDGE DIPPELL: Is there any cross-examination from MLA? 8 9 MR. AGATHEN: No, Judge. 10 JUDGE DIPPELL: From the Ag Associations. 11 No, Your Honor. MR. HADEN: 12 That's fine. Ms. Stemme. JUDGE DIPPELL: 13 No questions. MS. STEMME: 14 Public Counsel. JUDGE DIPPELL: 15 MR. WILLIAMS: Thank you, no. 16 Associated's attorney asked to JUDGE DIPPELL: 17 be excused for the rest of the day and waived cross. Sierra Club. 18 19 MS. RUBENSTEIN: No, thank you. 20 JUDGE DIPPELL: Renew Missouri. 21 MS. GREENWALD: No, thank you. JUDGE DIPPELL: Clean Grid Alliance. 2.2 23 MR. BRADY: No cross, thank you. 24 JUDGE DIPPELL: MEC. 25 Yes, Your Honor, briefly, but I MS. WHIPPLE:



2.2

believe we'll be touching on HC materials and I'd be
glad to hold off so that if others, I guess Grain Belt
comes after me. If they have cross that's on that, I'd
be glad to wait so that we just do that one time
through, whatever the Court prefers.

JUDGE DIPPELL: I think that's a good idea.

If Grain Belt thinks it might have cross that touches on any HC materials that MEC can hear.

MR. SCHULTE: We don't have any plan to cross that would touch on HC materials.

JUDGE DIPPELL: Let me check while we're on that subject to see if I knew of any questions that might touch on that. I don't think so. I think it's just going to be MEC. So we could just go ahead and go in an in-camera session now if everyone is prepared for that. This is just highly confidential, correct?

MS. WHIPPLE: Depending on Ms. Eubanks' answers, I will start with highly confidential but it could go into HCC depending on her answers. But I hope we just stay with highly confidential. I will assure the Court that if we get into HCC, it's MEC's HCC material. So that will be no problem.

JUDGE DIPPELL: So I will ask anyone in the room who's not authorized to hear the highly confidential information to please leave the room and I

Page 802 will send someone out upon the conclusion for you all to And I don't believe we have anyone online other return. than PSC employees and attorneys. Okay. We are now in the highly confidential in-camera session. (HC in-camera session)



1	(In-camera	session)	age 803
2			
3			
4			
5			
6			
7			
8			
9			
LO			
L1			
L2			
L3			
L4			
L5			
L6			
L7			
L8			
L9			
20			
21			
22			
23			
24			
25			

1	(In-camera	session)	Page 804
2			
3			
4			
5			
6			
7			
8			
9			
LO			
L1			
L2			
L3			
L4			
L5			
L6			
L7			
L8			
L9			
20			
21			
22			
23			
24			
25			

1	(In-camera	session)	Page 805
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			



1	(In-camera	session)		Page 806
2				
3				
4				
5				
6				
7				
8				
9				
LO				
L1				
L2				
L3				
L4				
L5				
L6				
L7				
L8				
L9				
20				
21				
22				
23				
24				
25				
l				



Transcript of Proceedings June 07, 2023 Page 807 1 (In-camera session) 2 3 4 5 (REPORTER'S NOTE: At this point, public 6 session resumed.) 7 JUDGE DIPPELL: Okay. And was that the end 8 then of your cross-examination? 9 MS. WHIPPLE: Yes, it was. Thank you, Judge. 10 JUDGE DIPPELL: All right. Is there 11 cross-examination from Grain Belt? 12 Yes, please. Good afternoon or MR. SCHULTE: 13 evening, Ms. Eubanks. 14 Good evening. THE WITNESS: 15 CROSS-EXAMINATION 16 BY MR. SCHULTE: 17 Could you please turn to page 3 of your 18 rebuttal testimony. 19 Α. Yes. 20 And beginning at line 20, the guestion there Ο. 21 reads does Staff support the modification to allow for 2.2 construction on easements prior to the entire Project 23 being fully financed. Did I read that question 24 correctly?

25

Α.

Yes.

	Page 808
1	Q. And is that modification also referred to as
2	phasing?
3	A. It is.
4	Q. And then at line 22, your answer is no, not at
5	this time?
6	A. That's correct.
7	Q. Is that still Staff's position?
8	A. Yes.
9	Q. Then later in that answer, and I'm turning now
10	to page 4, line 4, there's a sentence that states
11	further, Illinois has recently approved the GBE portion
12	of the Project in Illinois. Did I read that correctly?
13	A. You did.
14	Q. And again, this is in the answer to the
15	question regarding Staff's position on phasing. So is
16	the intended implication there that because Grain Belt
17	Express has received a certificate in Illinois it should
18	be able to finance both phases on the same timeline?
19	A. I would defer any financing questions to
20	Dr. Won.
21	Q. What is the intent of that statement that
22	Illinois has recently approved the Grain Belt Express

- portion of the Project in Illinois?
- So in the transcript from the 2016 case, my Α. understanding was there were a line -- there was a line



24

- of questioning about what would prevent Grain Belt from actually constructing the line dealt with financing construction costs and whether there would be customers to purchase from the line.
 - Q. Okay.

2

3

4

5

6

7

8

9

10

11

14

15

16

17

18

19

20

21

2.2

23

24

- A. So in that discussion there was also mention of regulatory approvals. So just was really just for clarification that other regulatory approvals have been satisfied --
 - O. Did that --
 - A. -- by state commissions to be clear.
- 12 Q. Did that discussion include consideration of the land acquisition process in Illinois?
 - A. I don't recall that specifically.
 - Q. Okay. Do you recall if that discussion, and again this was the discussion in the transcript in 2016?
 - A. Yes.
 - Q. Was it the 2016, so the 2016 docket was adjudicated before the PSC and then went up on appeal and then was remanded. Are you aware of whether this portion of the transcript was in the first part of the proceeding or in the remand part of the proceeding?
 - A. I believe it was in the remand portion of the proceeding, subject to check.
 - Q. Okay. We're just taking I see that you have a

citation footnote 3 on page 3 of your rebuttal Refers to the three major issues it may testimony. have, that Grain Belt may have with constructing the 4 And it cites to transcript Volume 10, pages 259 line. through 261. Is that an accurate reading of your transcript -- of your testimony?

1

2

3

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

- Α. That is what footnote 3 says, yes.
- 0. That was the portion of the transcript that you were referring to just in the previous exchange?
- I believe it's in that portion of the Α. transcript. Whether it might be off a page or two, I don't recall.
- We were able to locate Volume 10. Ο. Okay. looks like it's from March 20, 2017. Okay. I can move I just wanted to get that clear in my head. Do you recall if that part of the transcript that you cited in your testimony, did it include a consideration of the time for completing detailed engineering and design for the Project after receiving state regulatory approvals?
- Α. I don't recall that in that portion. I might need to look at it to recall.
- 0. Okay. And outside of whether the transcript from 2017 addressed those issues, did you consider those issues as part of your preparation for this current case in this rebuttal testimony?

- A. Can you clarify your question?
- Q. Sure. In preparing for Staff's position on phasing in this case, did you consider the land acquisition process in Illinois and the steps required for that in the timing of that process?
 - A. In Illinois?
 - Q. Yes.

- A. I'm not the only witness that is supporting Staff's position on phasing, so clarifying that. But I personally did not, no.
- Q. Okay. In preparing your rebuttal testimony and in your portion of the input on Staff's position on phasing, did you consider the timelines for completing detailed engineering and design for the portion of the project in Illinois?
 - A. I did not.
- Q. Okay. And in preparing your rebuttal testimony and for your input on Staff's position regarding phasing in this proceeding, did you consider the status of the PJM interconnection request?
- A. Staff, I believe, considered the PJM interconnection request, but that is in Shawn Lange's testimony.
- Q. Okay. And just one more. In preparing your rebuttal testimony and for your portion of the input on



- Staff's position on phasing in this proceeding, did you
 consider the process for obtaining environmental permits
 in Illinois?
 - A. In Illinois, no.

12

13

14

15

16

17

18

19

20

21

2.2

23

24

25

- 5 MR. SCHULTE: Those are all the questions that 6 I have. Thank you.
- 7 THE WITNESS: Thank you.
- 8 JUDGE DIPPELL: Thank you. Are there
- 9 | Commission questions for Ms. Eubanks? Mr. Chairman.
- 10 CHAIRMAN RUPP: Thank you, Judge.

11 QUESTIONS

BY CHAIRMAN RUPP:

- Q. I know in your surrebuttal testimony you had some concerns about black start and long generator lead lines that I believe the Company's witness Rodriguez had responded to. Did his response mitigate your questions or is there still concerns or issues or information that you are seeking?
- A. So Staff has a recommended condition that we are provided notice essentially if the line gets designated as a black start resource. There is some detailed information about what other steps need to be taken, and that's in a data request that's attached to my rebuttal testimony if the Commission is interested.

 So Staff's recommended condition alleviates the

- concerns. It was more the wanting to make sure the Commission was aware that just because something is designed to do something it doesn't necessarily mean all the steps are in place that that will actually come to fruition. And about the long generator lead line, I think that was maybe a phrase in my testimony. You know, Staff has discussed the various studies from the RTOs and that's in Shawn Lange's testimony. So I will say that Staff's material change definition discusses injection withdrawal rights, so that also alleviates Staff's concern, yeah.
- Q. Okay. I think it was your rebuttal testimony where you were talking, I think it got brought up on the Guidehouse report. So by reading that, is Staff's basic objection to the Guidehouse report is that the benefits are only materialized if the entire both Phase I and Phase II are completed?
- A. And that the line is fully subscribed and that there are enough generators on the front end to use the line, yes.
- Q. You also stated that one of the concerns with the study was that it assumed bidirectional flow with MISO and I think maybe it was even talking about the winter storm and how much it could have alleviated but I'm trying to remember the testimony. I believe it was



you stated that there's only an agreement with MISO for
one directional flow so those benefits wouldn't have
been there. Assuming that the Company does go to MISO
and inks agreement for bidirectional flow, do you
believe that those savings or values in the Guidehouse
study would materialize and do you believe that any of
the value that the line could have given Missouri
ratepayers because of Storm Uri would have or were
actually a real value that could have alleviated cost?

A. So there's quite a bit there. So I think my understanding is there's incremental investment and studies that would need to be done for SPP, so actually the front end of the line. And I think Mr. Rodriguez talked about this a little bit yesterday, how it would actually work. And he also explained some of the studies, and Mr. Lange can speak more to that also. So that was one part of your question.

And I think another part was --

- Q. So let me rephrase the question.
- A. Sorry.

2.2

Q. Did Staff discount the Guidehouse study because there was only one -- an agreement with MISO for one directional flow or does Staff believe that if bidirectional flow was on the line would the study have more validity in Staff's mind?



2.2

A. I think Staff took issue with more the
quantification of the value. I think our overall
recommendation regarding the Guidehouse study was not
really to rely on it for Findings of Fact related to
need. So to the extent there are benefits from
interregional transmission projects, Staff doesn't
dispute that. Does that answer your question?

Q. Yeah, I wanted to see if it was being discounted because the agreement isn't there or are you questioning the validity if there was an agreement would MISO -- would there be value, and I think you answered that, at least in my head.

Walk me through your thoughts on, I believe the Guidehouse study talked about or maybe it was somewhere else, the line being able to add capacity that MISO is short, would Staff seem to discount whether or not that was a reality? Am I remembering Staff's position correctly?

A. Yes. So I presented a table of MISO accredited values for wind and solar and other resources for capacity. And you know, I think my understanding is there's going to be quite a bit large addition of wind and solar to make up for, you know, the lower accredited capacity. So I think Staff was basically saying solar -- excuse me, storage, thermal or, you know, quite a bit

of wind and solar just as a clarification, yeah.

- Q. So basically if it was a gas power plant, the capacity could be there, you just -- through the discounted amount of capacity is given to wind and solar Staff views it as not being able to help?
 - A. You just need a lot more of it.
- Q. I know we talked about the accreditation values maybe on Monday and of the different -- we talked about wind, we talked -- but storage, how does Staff view the amount of capacity that could be added to help MISO if it was a storage versus gas versus wind versus solar?
- A. I don't think Staff has presented any specific numbers on that. We would have to look at a project I think to form some more thoughtful opinions. I apologize.
- Q. Does Staff believe that storage adds more capacity value than wind or solar?
- A. You're able to move, you know, store it and use the power when you need it. There's benefits to it.
 - Q. More capacity?
- A. Right.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

- CHAIRMAN RUPP: That's all I have for this witness. Thank you, Judge.
- JUDGE DIPPELL: Thank you. Are there other



Commission questions?	All right.	I've got a few here.
	QUESTIONS	

BY JUDGE DIPPELL:

2.2

- Q. In response to Dr. Won's proposed revisions to Grain Belt's amended financing conditions, Grain Belt's witness Rolanda Shine proposed a definition of installed transmission facilities. Does Staff have an opinion on that proposed definition as it relates to the financing conditions?
 - A. Staff does not oppose that addition.
- Q. Based on the review of Grain Belt's proposed modifications to the condition in the landowner protocol, it appears that Grain Belt is delineating different conditions for the existing line and the Tiger Connector. Is that Staff's understanding?
 - A. Yes.
- Q. And are Staff's proposed amendments to the conditions intended to be both the existing line and the Tiger Connector?
- A. So Staff has changed its position and is no longer recommending a specific one way or the other. We just want the landowner protocols to be clear to landowners of if it's for Phase I, if it's for the Tiger Connector, if it's for Phase II, if it's based on the data, the Commission Order.



- Q. My questions were written before you changed your position.
 - A. Understandable.
- Q. In your rebuttal on pages 8 through 10 you discuss Grain Belt's proposed changes to the landowner compensation package?
 - A. Yes.

2.2

- Q. And given changes and everything, have your concerns been addressed with regard to that?
- A. So Staff has changed its position and so the concerns on modification to ordered paragraph 8, we're just requesting that those changes be made to landowner protocols and be filed with the Commission as to whatever the Commission decides on that issue.
- Q. And then a similar question was asked of Mr. Chandler. Based on the elimination of the structure payments for landowners along the Tiger Connection, or Connector, are you able to envision a scenario in which a landowner might be worse off in terms of compensation?
- A. So the payment, as I understand it, would tick the size of the easement area, the 150 percent value and then the land value. So it's kind of a moving target, if you will. I do think that smaller parcels that would have a structure on it would likely not see the same benefit from the 150 percent only versus the 110 percent



in the structure payment.

2.2

- Q. I'm going to switch directions a little bit.

 In Mr. Petti's direct testimony that was adopted, he cites at page 9 to the Guidehouse report saying estimates that the Project will mitigate additional reliability driven generation capacity investments of approximately 526 million per year and approximately 7.6 billion for the life of the Project and then it further breaks down regional benefits in Table 9. Did you find those figures to be reasonable estimate of the Project benefits?
 - A. I actually don't have a copy of the Guidehouse study.
 - Q. I apologize.
 - A. Maybe Travis has it. What was the table? I'm sorry.
- Q. His testimony at page 9 cites to a Table 9 of the Guidehouse report saying that additional reliability driven generation capacity investments -- that it will mitigate additional reliability driven generation capacity investments, that's quite a mouthful, of approximately 526 million per year and approximately 7.6 billion for life of the Project.
 - MR. PRINGLE: If I could real quick, I have a copy of the Guidehouse study.



1 JUDGE DIPPELL: Thank you.

THE WITNESS: You said page 9?

BY JUDGE DIPPELL:

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- Q. It's page 9 of his direct testimony mentions or refers to Table 9 of the report. I don't know what page Table 9 is on. Did you do any analysis of those estimates? To be honest, I don't have the Guidehouse in front of me either.
- A. I will explain what Table 9 is. It's a Project potential resource adequacy benefit is what it's labeled. It has several point of interconnections, the benefiting system, the amount of injection, the cost of new entry or the CONE and then the calculated benefit related to that. I don't recall specifically addressing that table in my rebuttal testimony.
- Q. And just reviewing it there, you don't have an opinion at this point? I mean, if you haven't had a chance to analyze it, I don't want you to give me an opinion just to give me an opinion.
 - A. I don't have an opinion at the moment, no.
- Q. Okay. A number of reliability and resiliency benefits were identified in that Guidehouse report. In terms of the benefits of avoided loss load, would you say the benefit and/or the value of the avoided loss load is higher given the revised proposal incorporates



two injection points rather than one?

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

- A. Could you repeat your question?
- Q. It was kind of long. A number of reliability and resiliency benefits were identified in the Guidehouse report. In terms of the benefits of avoided loss load, would you say the benefit or value of the avoided loss load is higher given the revised proposal incorporates two injection points rather than one?
- A. I don't recall there being that type of calculation in the Guidehouse study. I could be forgetting something.
- Q. And then with regard to my previous question about the estimate of the Project benefits in that Table 9, is there another Staff witness that I should ask that question to that did review that?
- A. I reviewed it. I chose not to address it, right, so.
 - Q. So there's not another witness?
- A. No, not to my knowledge.
- JUDGE DIPPELL: Okay. Thank you. Okay. I think that's all the questions that the Commission had and myself. Is there further cross-examination based on questions from the bench from MLA?
- MR. AGATHEN: No, Your Honor.
- JUDGE DIPPELL: From the Agriculture



1	Associations.
2	MR. HADEN: No, Your Honor.
3	JUDGE DIPPELL: Ms. Stemme.
4	MS. STEMME: No questions.
5	JUDGE DIPPELL: Public Counsel.
6	MR. WILLIAMS: Thank you, no.
7	JUDGE DIPPELL: Sierra Club.
8	MS. RUBENSTEIN: No, thank you.
9	JUDGE DIPPELL: Renew Missouri.
10	MS. GREENWALD: No, thank you.
11	JUDGE DIPPELL: Clean Grid Alliance.
12	MR. BRADY: No, thank you.
13	JUDGE DIPPELL: MEC.
14	MS. WHIPPLE: No, Your Honor. Thank you.
15	JUDGE DIPPELL: Grain Belt.
16	MR. SCHULTE: Just one, I think.
17	FURTHER CROSS-EXAMINATION
18	BY MR. SCHULTE:
19	Q. In responding to some questions from Chair
20	Rupp, you referenced the Staff proposed condition
21	regarding the definition of material change?
22	A. I did.
23	Q. And you referenced the threshold of a 100 MW
24	change in injection or withdrawal?
25	A. I don't think I specified 100 MW, but I did



1	reference the injection and withdrawal, yes.
2	Q. Is Staff's recommendation a 100 MW threshold
3	change in an injection or withdrawal?
4	A. Let me look at the That's not in the
5	position statement. I would defer to Staff witness
6	Michael Stahlman.
7	MR. SCHULTE: Okay. Thank you, Judge.
8	JUDGE DIPPELL: That's all?
9	MR. SCHULTE: Yeah, I just wanted to make sure
10	Since she had mentioned that condition, I wanted to
11	make sure she wasn't the right witness to ask questions
12	about that condition.
13	JUDGE DIPPELL: Is there any redirect from
14	Staff?
15	MR. PRINGLE: Brief, Judge.
16	REDIRECT EXAMINATION
17	BY MR. PRINGLE:
18	Q. Ms. Eubanks, when it came to your input into
19	Staff's position regarding the opposition of phasing,
20	what did you consider?
21	A. So I went back and looked at what the
22	Commission had decided previously in the Report and
23	Order on financing that condition and read the
24	transcript and considered the impact of House Bill 205,

because that was part of what I was looking at, and

1 those are the things that I took into consideration 2 primarily as well as input from other Staff members. 3 Just to clarify for the record, by House Bill 205, you mean House Bill 2005? 4 5 Α. I do, yes. 6 Thank you very much, Ms. MR. PRINGLE: 7 Nothing further, Judge. Eubanks. JUDGE DIPPELL: Thank you, Ms. Eubanks. 8 9 may step down and be excused. 10 (Witness excused.) 11 JUDGE DIPPELL: I was about to ask if Dr. Won 12 is available. He's coming up the aisle. So answers 13 that question. He's on the hook now. Do you solemnly 14 swear or affirm that the testimony you're about to give 15 at this hearing will be the truth? 16 THE WITNESS: I do. Thank you. If you could spell 17 JUDGE DIPPELL: 18 your name for the court reporter, please. 19 THE WITNESS: Seoung Joun Won, S-e-o-u-n-g 20 J-o-u-n, last name W-o-n. 21 JUDGE DIPPELL: Okay. Mr. Pringle, go ahead. 2.2 MR. PRINGLE: Thank you, Judge. Good evening, 23 Dr. Won. 24 Hello. THE WITNESS: 25 SEOUNG JOUN WON,

1	having been first duly sworn, was examined and testified
2	as follows:
3	DIRECT EXAMINATION
4	BY MR. PRINGLE:
5	Q. By whom are you employed and in what capacity?
6	A. I work for Missouri Public Service Commission
7	as the Manager of the Financial Analysis Department.
8	Q. Did you contribute to Staff's Report in this
9	case which has been previously marked as Exhibit 109?
10	A. Yes.
11	Q. Did you also submit rebuttal testimony in this
12	case which has been previously marked as Exhibit 108?
13	A. Yes.
14	Q. At this time, do you have any corrections to
15	make to the Staff Report or your rebuttal testimony?
16	A. No.
17	Q. If I asked you the same questions today within
18	your rebuttal testimony, would your answers be the same?
19	A. Yes.
20	Q. Are those answers true and correct to the best
21	of your knowledge and belief?
22	A. Yes.
23	MR. PRINGLE: Thank you, Dr. Won. At this
24	time I offer Exhibit 108 and 108HC into the record.
25	JUDGE DIPPELL: Would there be any objection



1 to Exhibit 108 and 108HC? Seeing none, I will admit 2 those. (STAFF EXHIBITS 108 AND 108HC WERE RECEIVED 3 INTO EVIDENCE AND MADE A PART OF THIS RECORD.) 4 5 Thank you, Judge. At this time MR. PRINGLE: 6 I tender the witness for cross-examination. 7 JUDGE DIPPELL: Is there any cross-examination 8 from MLA. 9 MR. AGATHEN: No, Your Honor. Thank you. 10 JUDGE DIPPELL: Agriculture Associations. 11 None, Your Honor. MR. HADEN: 12 Ms. Stemme. JUDGE DIPPELL: 13 No questions. MS. STEMME: 14 Public Counsel. JUDGE DIPPELL: 15 MR. WILLIAMS: Thank you, no. 16 Sierra Club. JUDGE DIPPELL: 17 MS. RUBENSTEIN: No, thank you. 18 JUDGE DIPPELL: Renew Missouri. 19 MS. GREENWALD: No, thank you. Clean Grid Alliance. 20 JUDGE DIPPELL: 21 MR. BRADY: No questions. Thank you. 2.2 JUDGE DIPPELL: MEC. 23 MS. WHIPPLE: No, Your Honor. Thank you. 24 JUDGE DIPPELL: Grain Belt. 25 MR. SCHULTE: Good evening, Dr. Won.



1	THE WITNESS: Good evening.
2	CROSS-EXAMINATION
3	BY MR. SCHULTE:
4	Q. Were you in the room for Ms. Eubanks's
5	testimony today?
6	A. I don't have it.
7	Q. I'm sorry. Were you in the room for her live
8	testimony?
9	A. Yes.
10	Q. She referenced your input regarding Staff's
11	position on phasing. So I wanted to ask you a couple
12	questions about considerations that Staff took into
13	account with regard to its position on phasing. In your
14	role in your input on Staff's position, did you consider
15	the land acquisition process in Illinois and the timing
16	of that process?
17	A. No.
18	Q. What about the timelines for completing
19	detailed engineering and design for the project in
20	Illinois?
21	A. I did not.
22	Q. Did you consider the status of the PJM
23	interconnection requests?
24	A. No.
25	Q. And did you consider the need for obtaining



- Transcript of Proceedings Page 828 1 environmental permits or the timelines associated with those in Illinois? 2 3 Α. No. 4 MR. SCHULTE: Okay. Those are all the 5 questions I have. Thank you.
- 6 JUDGE DIPPELL: Thank you. Are there 7 Commission questions for Dr. Won?
- 8 CHAIRMAN RUPP: No.
- 9 JUDGE DIPPELL: I have just a couple.
- 10 OUESTIONS
- 11 BY JUDGE DIPPELL:

16

17

18

- 12 Did Staff review Grain Belt's pro forma Ο. 13 information for Phase I as submitted in Rolanda Shine's surrebuttal Schedule RS-3? 14
 - Yes, but my expertise is limited to the financial ability. My understanding is those schedules mainly focus on economic feasibility issue.
 - Okay. Did your limited review, did you have Ο. any concerns on your limited review?
- 20 Α. I have concerns, but I would like to defer to 21 the Staff witness Michael Stahlman to answer that 2.2 question.
- 23 Michael Stahlman? 0.
- 24 Stahlman. Α.
- 25 I can't say it either so. And he's going to Q.

1 be our last Staff witness today. Okay. Or not today. 2 Our last Staff witness. 3 In response to your proposed revisions to 4 Grain Belt's -- sorry. Let me start over. In response 5 to your proposed revisions to Grain Belt's amended 6 financing conditions, and if this has changed let me 7 know, Grain Belt's witness Rolanda Shine proposed a 8 definition of installed transmission facilities. 9 Staff have an opinion about that proposed definition as 10 it relates to the financing? Actually that definition is not really matter 11 Α. 12 for the financial ability. So in my perspective there's 13 no concern about the definition. 14 JUDGE DIPPELL: Okay. That's all the 15 questions I had. Is there any additional 16 cross-examination based on questions from the bench? 17 MLA. 18 MR. AGATHEN: No, Your Honor. 19 JUDGE DIPPELL: Agriculture Associations. 20 Not seeing anybody. 21 JUDGE DIPPELL: Ms. Stemme. 2.2 MS. STEMME: No questions. 23 Public Counsel. JUDGE DIPPELL: 24 MR. WILLIAMS: Thank you, no. 25 JUDGE DIPPELL: Associated has left the

1 building. Sierra Club. No, thank you. 2 MS. RUBENSTEIN: Renew Missouri. 3 JUDGE DIPPELL: 4 MS. GREENWALD: No, thank you. 5 JUDGE DIPPELL: Clean Grid Alliance. 6 MR. BRADY: No, thanks. 7 JUDGE DIPPELL: MEC. 8 MS. WHIPPLE: No, Your Honor, thank you. 9 JUDGE DIPPELL: Grain Belt. 10 MR. SCHULTE: No further questions. Thank 11 you. 12 JUDGE DIPPELL: Any redirect from Staff? 13 Brief, Judge. Mr. PRINGLE: Thank you. 14 REDIRECT EXAMINATION 15 BY MR. PRINGLE: 16 Dr. Won, in questions from the bench you 0. 17 brought up economic feasibility. What is your definition of economic feasibility? 18 19 The definition of economic feasibility is Α. 20 focus on the comparison to investment and return. 21 Ο. Does that have any difference in your opinion 2.2 regarding financial feasibility? 23 Α. Financial feasibility you can interchangeably 24 use.

And then just for clarification, can you also

Q.

define financial viability?

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

- So financial viability has very similar definition to economic feasibility, but that is more focused on the financial statement analysis, for example, ratio. When you conduct economic feasibility study, investment amount is kind of treat as given number and then calculating the cash flow analysis and compare net present value so that project is profitable That is determined during the economic or not. feasibility study. The financial viability is focused on the entity can be survive or not. So that analysis considering the revenue streams and expense streams. Then using the financial statement information. So several financial ratios is calculated and then focus on the different possibility. So calculate and evaluate about that project is survive or not.
 - Q. And do you recall did you or Staff use the term financial viability in our report or your rebuttal?
 - A. Staff did not use financial viability. That is not Tartan criteria.
 - MR. PRINGLE: Thank you, Dr. Won. No further questions, Judge.
- JUDGE DIPPELL: Thank you. Thank you,

 Dr. Won. You are -- your testimony is completed and you

 may be excused.



Page 832

1 THE WITNESS: Thank you. 2 (Witness excused.) 3 JUDGE DIPPELL: I think we're on a roll. 4 if Mr. Lange is available. Do you solemnly swear or 5 affirm that the testimony you're about to give at this 6 hearing will be the truth? 7 THE WITNESS: I do. 8 JUDGE DIPPELL: Can you please spell your name 9 for the court reporter? 10 THE WITNESS: It is Shawn, S-h-a-w-n, Lange, 11 L-a-n-q-e. 12 Mr. Lange, you're another soft JUDGE DIPPELL: 13 spoken person. So I'm going to need you to speak up a 14 little and speak into that mike. Whenever you're ready, 15 Mr. Pringle. 16 Thank you, Judge. Good evening, MR. PRINGLE: 17 Mr. Lange. 18 THE WITNESS: Good evening. 19 SHAWN LANGE, 20 having been first duly sworn, was examined and testified 21 as follows: 2.2 DIRECT EXAMINATION 23 BY MR. PRINGLE: 24 By whom are you employed and in what capacity? Ο. 25 I'm employed by the Missouri Public Service Α.

Commission as a Senior Professional Engineer.

- Q. And Mr. Lange, did you contribute to Staff's Report in this case which has been previously marked as Exhibit 109?
 - A. I did.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- Q. And did you also prepare for this case rebuttal testimony that has been previously marked as Exhibit 104?
 - A. I did.
- Q. At this time, do you have any corrections to make to the Staff Report or your rebuttal testimony?
- A. I have one correction to make to my testimony. That is page 16, line 13, sentence that starts on line 13. The way it reads currently is GBX is proposing that the power associated with the MJMEUC contract travel the Tiger Connector and be injected into the interconnection at or near McCredie. I would like to change the word McCredie to Burns. So it would read GBX is proposing that the power associated with the MJMEUC contract travel the Tiger Connector and be injected into the interconnection at or near Burns.
- Q. Are there any further corrections or additions to make to your testimony?
 - A. Not that I'm aware of.
 - Q. If I asked you the same questions today within



1	your rebuttal testimony, would your answers be the same?
2	A. Yes.
3	Q. Are those answers true and correct to the best
4	of your knowledge and belief?
5	A. They are.
6	MR. PRINGLE: Thank you, Mr. Lange. At this
7	time, I enter Exhibits 104 and 104HC into the record.
8	JUDGE DIPPELL: Would there be any objection
9	to Exhibits 104 and 104HC? Hearing none, I will admit
10	those exhibits.
11	(STAFF EXHIBITS 104 AND 104 HC WERE RECEIVED
12	INTO EVIDENCE AND MADE A PART OF THIS RECORD.)
13	MR. PRINGLE: Thank you, Judge. At this time,
14	I tender the witness for cross-examination.
15	JUDGE DIPPELL: I'm going to ask general is
16	there going to be any cross-examination of Mr. Lange?
17	Are there any Commissioner questions for Mr. Lange?
18	Mr. Chairman.
19	CHAIRMAN RUPP: Good evening.
20	THE WITNESS: Good evening.
21	QUESTIONS
22	BY CHAIRMAN RUPP:
23	Q. Did you review the testimony of Michael
24	Mulligan on behalf of the Sierra Club in his, basically
25	his testimony on the benefits of the line to the RTOs



and the regional power systems?

2.2

- A. It has been a while since I reviewed his testimony.
- Q. We'll talk real 10,000 foot level. Do you agree with his testimony?
 - A. I guess which -- can you give me.
- Q. The general benefits he outlined of this

 Project for the region for transmission, just a general
 summation of his entire analysis.
- A. What I can say is that this Project is very complicated and that the benefits associated with this Project can be challenging to discern partly because the end users aren't kind of known. So where that power and where those potential power attributes may go may not be readily known. The Project can provide and has the ability to provide, you know, reliability benefits. You know, it is an additional transmission resource. It can help provide power to the region. It can, you know, it's access another transmission resource.

The challenge is where and to what degree the benefits will be, if you will. You know, I'm not trying to say that there will not be benefits. I'm just trying to say how to calculate those and to what RTO or where those benefits may manifest themselves is not readily discernible. I don't know if that really.

Page 836

1	Q. I think that's fair enough. Your testimony
2	kind of hinged on the revenues generated through the
3	cost of energy through PJM at least from my recollection
4	of it and that was like a key deciding point that if
5	those revenues are not there the \$10 differential that
6	was brought up in the last case that that kind of
7	negated a lot of the potential value or revenue for this
8	Project and therefore the phasing should not be gone
9	ahead with. Am I summarizing that correctly in your
10	opinion of what you are trying to convey in your
11	testimony?
12	A. I think you may be summarizing Mr. Stahlman's
13	testimony.
14	Q. I am. She said Stahlman was going to be our
15	last.
16	A. Yeah.
17	Q. All right. Well everything else going well
18	for you? (Laughter)
19	A. Yeah.
20	CHAIRMAN RUPP: Excellent. Well, that's all I
21	have for this witness.
22	JUDGE DIPPELL: Are there any other Commission
23	questions for Mr. Lange? I have one here on my paper.
24	Let's see if it's still relevant.



QUESTIONS

BY JUDGE DIPPELL:

1

2

3

4

5

6

7

8

9

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

25

- Q. In Baker's surrebuttal on pages 8 to 10 he responds to some concerns you raised in your rebuttal related to the Guidehouse report. Did his response address your concerns?
 - MR. PRINGLE: If I may, Judge, may I -JUDGE DIPPELL: Yes, thank you.
- MR. PRINGLE: -- Mr. Baker's surrebuttal I'll be bringing to the witness.

10 BY JUDGE DIPPELL:

- Q. Starts at page 8.
- A. Is there a page 10; is that correct?
 - Q. Pages 8 to 10 he responded to your rebuttal testimony and I just wondered if his response was to address your concerns or if you still have remaining concerns what they are?
 - A. I think this kind of goes along with my answer to Mr. Chairman's question that with the amount of information that is known at this time it is difficult to discern where and necessarily when and how the benefits will manifest themselves. So inasmuch as the Guidehouse report and what I have seen of the Guidehouse report assumes what I would view as kind of best-case scenario and the benefits of that best-case scenario, you know, what those would be and where those would



- manifest. I can't necessarily say that that will happen and I think that that goes to a lot of the issues that Staff is having, you know, with the Guidehouse study itself.
 - JUDGE DIPPELL: Okay. Thank you. Anything else? Will there be any further cross-examination questions based on questions from the bench?
 - MR. SCHULTE: I do have a couple.
- JUDGE DIPPELL: Anyone else?
- MR. SCHULTE: All right. Go right ahead,
- 11 Mr. Schulte.

2

3

4

5

6

7

8

12

14

15

16

17

18

19

20

21

2.2

23

24

25

CROSS-EXAMINATION

13 BY MR. SCHULTE:

- Q. Picking up where the Judge just left off, by best-case scenario are you referring to a scenario where relevant commercial agreements are executed for offtake of the capacity and energy from Grain Belt?
- A. When I said best-case scenario, it is that the power and the capacity from the line would be contracted for in such a way as, and I don't want to get into any of the HCC information, but it is assuming that the capacity of the line is contracted for, it is assuming that the energy over the line has a certain level of capacity factor, and it is assuming that, you know -- those assumptions, like I said before, with the relative



- information that we currently have, I find it difficult to make those assumptions fact that this will happen in this way. It could. But to say that it will, I don't know if I can say that.
- Q. Okay. I heard you list the best-case scenario includes commercial contracts are executed for capacity on the line and the capacity factor of the energy delivered is as Grain Belt has said it will be.
 - A. In studies.
 - O. Are those the two?
- A. I believe so.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- Q. And hypothetically, because I understand that you have some concerns with those two assumptions, but assuming for the purpose of this question that those two factors are fulfilled, do you have other issues with the Guidehouse report's methodology?
 - A. When you say fulfilled.
- Q. If they -- If those two factors are satisfied in your referenced best-case scenario, do you have issues with the Guidehouse methodology or is it just those assumptions?
- A. Well, I was speaking in response to the surrebuttal testimony of Robert Baker. As far as the overall Guidehouse report, I think Staff witness Claire Eubanks is the person to ask about other issues that



Staff may have with that study.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- Q. So on pages 9 and 10 of Mr. Baker's surrebuttal testimony, line 10, are you there? Do you have that document? Page 9, line 10.
 - A. Page 9, line 10.
- Q. Mr. Lange states that the assumptions made by Guidehouse overstate known impacts on capacity auction prices because current contracts do not interconnect into MISO. Those current contracts are what we've been talking about, right, with regard to contracts for delivery of energy over the Grain Belt Express Project?
 - A. I would assume that is what he is saying.
- Q. And Mr. Baker goes on to testify I would like to reiterate that the Guidehouse report utilizes several interesting assumptions including the presumption that relevant commercial agreements are executed. And so my question is simply is your issue with the Guidehouse study those assumptions or is it the underlying methodology?
- A. I would have to say my issues or any issues that I have outlined with regard to the Guidehouse study would have to be with regard to the assumptions made.
- Q. Okay. Thank you. I think I do have one more subject. Chairman Rupp asked you some questions about the reliability and resiliency benefits?

A. Yes.

2.2

- Q. And your response was that the benefits are difficult to determine because we don't know the specific contracting offtakers for the line. Is that a fair summation?
 - A. Yeah, I would say that's fair.
- Q. Would you agree that the reliability and resiliency benefits depend in large part on the capacity of the transmission line, the capacity and engineering capabilities of the converter stations, and the locations of the various points of interconnections and those converter stations rather than the specific identity of contracting offtakers?
- A. Well, the contracting offtakers would show where those benefits would be with regard to the RTO environment. So I mean, yes, and I think this goes to other Staff issues or, yeah, issues, is that there's a difference between capability and what would realistically, or I'm not saying realistically, what is feasible. So yes, there is capability on the line but what is the feasible manifestation of the power attributes and where is that going to occur and that's where I have difficulty.
- Q. So the economic feasibility of the Project is tied to the commercial contracts, right, and the



1	identity of commercial partners but
2	A. Yes.
3	Q I'm not asking about that. I'm asking
4	about simply the reliability and resiliency benefits are
5	a function of the engineering capabilities of the line,
6	are they not?
7	A. They would be a large part of that would be
8	the engineering capabilities of the line. But then who
9	has control over that line as far as what RTO may have
10	dispatch authority over over that line will at least in
11	my mind play a role in that.
12	MR. SCHULTE: Okay. I have no further
13	questions. Thank you.
14	JUDGE DIPPELL: Thank you. Is there any
15	redirect from Staff?
16	MR. PRINGLE: Yes, Judge.
17	REDIRECT EXAMINATION
18	BY MR. PRINGLE:
19	Q. Mr. Lange, regarding the Guidehouse study
20	A. Yes.
21	Q again. Other than the size of the line,
22	did that study consider any other engineering designs?
23	A. Engineering designs, not that I'm aware of.
24	Q. And then there was a lot of talk about the
25	executing contracts, but what about generators as a



Page 843

- source of power? Do you have any questions about that in your analysis?
 - A. Yes. Part of that is -- that goes to the, I know other witnesses have had this question raised, the capacity factor and what --
 - MR. SCHULTE: I'm sorry. I have to object. I don't want to but I don't want to lose an opportunity to cross-examine the witness on a new subject matter. This did not -- the capacity factor and the identity of the generators on the western terminus of the line did not come up in any of the bench questions or cross-examination.
 - MR. PRINGLE: In response, Judge, a lot of the talk was about unknowns on the line. This is another unknown.
 - JUDGE DIPPELL: I'm going to let him answer and, Mr. Schulte, since I gave Mr. Haden a little extra cross-exam earlier, I'll give you a second shot as well if you feel the need to respond.
- 20 MR. PRINGLE: I knew I should have objected at the time.
- JUDGE DIPPELL: You may answer, Mr. Lange.
- THE WITNESS: Would you mind repeating the
- 24 question? I'm sorry.
- 25 BY MR. PRINGLE:

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18



1	Q. Yes, it had to do with the unknown regarding
2	the generators for the line.
3	A. Oh, yes. I think in the Guidehouse study
4	there has been assumed level of capacity factor and that
5	would make certain assumptions as to what the mix of
6	wind and/or solar and/or potentially storage may be.
7	But as far as I am aware, I do not know exactly what the
8	mix of generator resources will be, and that capacity
9	factor is vastly different if, you know, if it is mainly
10	wind versus wind and solar versus wind, solar and
11	storage or could be.
12	MR. PRINGLE: Thank you, Mr. Lange. No
13	further questions on this redirect.
14	JUDGE DIPPELL: Thank you. Mr. Schulte, did
15	that raise any questions for you?
16	MR. SCHULTE: I think I can reserve my
17	questions for Mr. Stahlman.
18	JUDGE DIPPELL: Thank you. In that case,
19	Mr. Lange, your testimony is complete and you may be
20	excused.
21	THE WITNESS: Thank you.
22	(Witness excused.)
23	JUDGE DIPPELL: So it is almost seven o'clock.
24	So we're going to wind down. But I want to find out
25	first if there's going to be any cross-examination of



1	Staff's next witness. Is it Poudel?
2	MR. PRINGLE: Yes. Dr. Krishna Poudel.
3	JUDGE DIPPELL: Does anyone Are any of the
4	parties going to have cross-examination for that
5	witness?
6	MR. SCHULTE: Grain Belt does not, no.
7	JUDGE DIPPELL: Okay. I don't think the
8	Commission has any questions for that witness as well.
9	Would you like to go ahead and offer that testimony?
10	MR. PRINGLE: I would love to.
11	JUDGE DIPPELL: If that's okay.
12	MR. SCHULTE: We may be able to do this for a
13	couple other Staff witnesses, at least from Grain Belt's
14	perspective. Obviously the bench has their opportunity
15	as well and the parties. But from Grain Belt's
16	perspective, we don't have any prepared cross of Alan
17	Bax, Jordan Hull or Michael Rush of the remaining Staff
18	witnesses. Of course, if the Commission has questions,
19	we would reserve our right to cross-examine on bench
20	questions.
21	JUDGE DIPPELL: Absolutely. As far as Alan
22	Bax, do any of the other parties have cross-examination
23	questions for Alan Bax? For Jordan Hull? And Michael
24	Rush? Okay. I haven't had an opportunity to check with
25	all of the Commissioners about Mr. Rush and Mr. Bax.



1	Okay. I'm going to Let's go ahead with Poudel and
2	Hull, because I don't think there's any questions for
3	those two. There might be some Commission questions for
4	Bax and Rush. So let's go ahead and dispose of the
5	testimony for those two Staff witnesses and then call it
6	a night and then come back with Mr. Bax in the morning
7	and we may quickly dispense with those two Staff
8	witnesses.
9	MR. PRINGLE: That works for me. So we're
10	just going with Mr. Hull and Dr. Poudel. They're the
11	two we're going to enter in their testimony, correct?
12	JUDGE DIPPELL: Yes. Are there corrections
13	for any of that testimony?
14	MR. PRINGLE: Not that I'm aware of. Let me
15	double check. No corrections for either one.
16	JUDGE DIPPELL: If you just want to offer
17	those.
18	MR. PRINGLE: At this time, I move to enter
19	Staff Exhibit 103 and Staff Exhibit 105 into the record.
20	JUDGE DIPPELL: Would there be any exhibit to
21	103, which is the rebuttal testimony of Jordan Hull, or
22	105, the rebuttal testimony of Krishna Poudel?
23	CHAIRMAN RUPP: Could we have Dr. Poudel stand
24	up and wave. He's been eagerly waiting all day to
25	testify and to get to the point and now he's like oh.



Т	So just stand up and wave.
2	DR. POUDEL: Thank you so much.
3	JUDGE DIPPELL: Very good. Okay. With that,
4	I will enter those into the record.
5	(STAFF EXHIBITS 103 AND 105 WERE RECEIVED INTO
6	EVIDENCE AND MADE A PART OF THIS RECORD.)
7	JUDGE DIPPELL: And we will start tomorrow
8	again at 8:30. And if we can be as productive as we
9	were today, we can maybe finish even if we have to stay
10	a little late tomorrow night.
11	MR. PRINGLE: Just so we're clear, Judge,
12	we'll be starting tomorrow morning with Mr. Alan Bax?
13	JUDGE DIPPELL: Yes. And are there any other
14	before you take off, everybody stay seated, are there
15	any other preliminaries from the parties, okay, or
16	anything?
17	Commissioner would like to have the mike.
18	COMMISSIONER HOLSMAN: Thank you. I just want
19	to let everybody know that tomorrow I will have to go
20	back to Kansas City. I've got a two-month long wait
21	with a cardiologist to see. If I don't make it, it
22	might be another two months. I would appreciate some
23	grace in letting me do that. I will be calling in from
24	the WebEx. So I will be participating and I do have

25

some questions for tomorrow's witnesses so you will hear

Page 848 me over the loud speaker. I just wanted to let you all know why I won't be here in person. Thank you. JUDGE DIPPELL: On that note, now you can run out of here. We can go off the record. (Thereupon, the proceedings concluded for the day at 6:57 p.m. and will begin tomorrow at 8:30 a.m.)



	Transcript of Proceedings	June 07, 2023
-		Page 849
1	I N D E X	Dago
2		Page
	Company's Witnesses:	
3	company b wronesses	
	KEVIN CHANDLER	
4	Cross-Examination by Mr. Agathen	591
	Cross-Examination by Mr. Haden	599
5	Cont'd Cross-Examination by Mr. Haden	637
	Questions by Commissioner Holsman	644
6	Questions by Chairman Rupp	667
	Questions by Commissioner Hahn	675
7	Questions by Judge Dippell	678 687
8	Further Cross-Examination by Mr. Pringle Further Cross-Examination by Mr. Agathen	690
0	Redirect Examination by Mr. Schulte	692
9	Recross-Examination by Mr. Haden	699
	neerood Enaminaeron S ₁ in . naden	
10	DAVID LOOMIS	
	Direct Examination by Mr. Loomis	702
11	Cross-Examination by Mr. Pluta	704
	Cross-Examination by Mr. Agathen	706
12		
1 2	Office notice of Report and Order in EA-2014-0207	720
13	EA-2014-020/	739
14	Cross-Examination by Mr. Haden	745
	Cross-Examination by Mr. Ellinger	788
15	Questions by Chairman Rupp	790
	Redirect Examination by Mr. Pluta	791
16		
	Staff's Witnesses:	
17		
1.0	CLAIRE EUBANKS	F.O.C.
18	Direct Examination by Mr. Pringle	796
19	HC In-camera Session	802
± 2	iic iii camera session	002
20	CLAIRE EUBANKS	
	Cross-Examination by Ms. Whipple	802
21		
	HC-C In-camera Session	
22		
0.0	Cont'd Cross-Examination by Ms. Whipple	805
23	Dublic Coccion Documed	0.07
24	Public Session Resumed	807
4 4		
25		
ļ		J



	Transcript of Proceedings	June 07, 2023
1	INDEX	Page 850
2	(Continued)	Page
3	Company's Witnesses:	
4	CLAIRE EUBANKS	
5	Cross-Examination by Mr. Schulte Questions by Chairman Rupp	807 812
6	Questions by Judge Dippell Further Cross-Examination by Mr. Schulte	817 822
7	Redirect Examination by Mr. Pringle	823
8	SEOUNG JOUN WON Direct Examination by Mr. Pringle	825
9	Cross-Examination by Mr. Schulte Questions by Judge Dippell	827 828
10	Redirect Examination by Mr. Pringle	830
11	SHAWN LANGE Direct Examination by Mr. Pringle	832 834
12	Questions by Chairman Rupp Questions by Judge Dippell Cross-Examination by Mr. Schulte	837 838
13	Redirect Examination by Mr. Pringle	842
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		



1		Page 851
1	EXHIBIT INDEX	Received
2	Company's Exhibits:	
3	21 Direct Testimony of David Loomis and accompanying Schedule DL-1 and DL-2	
4	(Public) 22 Surrebuttal Testimony of David Loomis	704
5	(Public) 24 Grain Belt Express Exhibit C-Easement	704
6	Calculation Sheet (John Doe) 25 Grain Belt Express Exhibit C-Easement	672
7	Calculation Sheet	672
8	MLA's Exhibits:	
9	303 Page 1500, line 4-18 of the transcript in EA-2014-0207	
10	304 2-page excerpt, pages 17 and 25, from Report and Order in EA-2014-0207	
11	305 Economic Impact Analysis for Sapphire Sky Wind Farm in McClean County, Illino.	is
12 13	Staff's Exhibits:	
14	102 Rebuttal Testimony of Claire Eubanks, Pi and Attached Schedules (Public)	799
15	102HC Rebuttal Testimony of Claire Eubanks and Attached Schedules (HC) 102HC-C Rebuttal Testimony of Claire Eubanks	799
16	and Attached Schedules (HC-C) 103 Rebuttal Testimony of Jordan T. Hull	799
17	and Attached Schedules 104 Rebuttal Testimony of Shawn E. Lange, Pi	847 E
18	and Attached Schedules (Public) 104HC Rebuttal Testimony of Shawn E. Lange	834 , PE
19	and Attached Schedules (HC) 105 Rebuttal Testimony of Krishna L. Poudel	834
20	and Attached Schedules 108 Rebuttal Testimony of Seoung Joun Won, I	847 PhD
21	and Attached Schedules (Public) 108HC Rebuttal Testimony of Seoung Joun Wo	826 n, PhD
22	and Attached Schedules (HC)	826
23	(All exhibits were retained by the Publ. Commission.)	ic Service
24		
25		



1	CERTIFICATE OF REPORTER
2	STATE OF MISSOURI)
3	COUNTY OF COLE)
4	I, Beverly Jean Bentch, RPR, CCR No. 640, do
5	hereby certify that I was authorized to and did
6	stenographically report the foregoing Public Service
7	Commission evidentiary hearing; and that the transcript,
8	pages 587 through 851, is a true record of my
9	stenographic notes.
10	I FURTHER CERTIFY that I am not a relative,
11	employee, attorney, or counsel of any of the parties,
12	nor am I a relative or counsel connected with the
13	action, nor am I financially interested in the action.
14	Dated this 23rd day of June, 2023 Bentch
15 16	Carray Searc Corcar
17	Beverly Jean Bentch, RPR, CCR No. 640
18	Beverry beam Benedit, RFR, CCR No. 040
19	
20	
20	
22	
23	
24	
25	



\$

\$10 836:5

\$10,000 593:24 670:21 674:9 675:8

\$100,000 615:22, 24 670:15,20 673:14 674:15

\$128,000 594:4

\$13.9 723:14

\$150,000 594:5

\$18,000 690:1

\$20,000 616:9 670:21 673:15

\$22,793,545 792:4

\$22.8 784:12,16

\$3,500 674:16,18, 19

\$34,958 674:24

\$4,000 670:17

\$5,000 616:13 670:25

\$526,000,000 719:12

\$6,000 593:22 594:14 690:2

\$7 724:13,15,17, 19,25

\$70,000 670:22,23

1

1 632:15 703:2 735:16 736:14

1,000 683:20

1,200 683:19,20, 25

10 600:2 647:4,20, 21 648:13 649:3 650:18 659:7 669:1,8,14 670:3, 6 674:3,8,10 685:9 748:15,19, 20 749:5,6,12 778:11,19,24 796:21 797:4,25 810:4,13 818:4 837:2,12,13 840:2,3,4,5

10,000 835:4

10-acre 593:24 595:6

100 657:23 685:1, 14,21 708:2 756:4,6,10,22 762:8,14,19 822:23,25 823:2

100,000 616:7,14, 17 674:6,7

102 796:16 798:17,24 799:3

102HC 798:17 799:3

102HC-C 799:3

103 846:19,21 847:5

104 833:8 834:7,9,

104HC 834:7,9

105 846:19,22 847:5

108 825:12,24 826:1,3

108HC 825:24 826:1,3

109 796:13 797:6 798:19 825:9 833:4

10:30 637:4

11 600:3 614:25 685:9 707:7 711:1,23 719:9 753:11

110 592:13 593:9 649:16,20 651:5 666:17 684:7 694:14 700:7 818:25

12 614:25 779:8

122 763:22

13 614:25 615:2 634:14 719:9 833:13,14

14 614:20 615:2 716:19

15 615:2 634:12 702:17 736:25 749:6 755:19 773:14

150 592:18 593:1, 7,14,18 594:16, 19,24 615:1 621:12 623:8 625:20 649:16,21 651:5 666:16 668:21 672:10 675:14 686:5 688:6 694:13 695:24 696:11,25 697:3,4 700:7 818:21,25

1500 731:5,7 734:3

16 602:9 634:12, 13 638:6 641:2 642:7 798:1,3 833:13

17 596:5 634:22 638:6 641:2 642:7 680:23 685:8 731:9 735:13

736:15,17 784:11

17.7 792:1

176 594:13

18 596:9 659:7 702:17 731:10,11 734:3 798:1,3

180 594:14

19 676:13,22

1:30 678:13

2

2 615:20 618:4,9 627:16 631:10,11, 13 651:12 661:11 667:20 668:24 669:23 670:13 671:1,3 674:17, 19,20 678:25 703:10 799:17

2.3 603:7

2.b 631:8,9 632:13

20 615:2,16,24 635:11 641:3 642:6,7 647:3,19 648:10 649:3 650:18 668:22,25 669:5 670:15 673:14 756:8 796:25 797:25 807:20 810:14

200 730:16 756:25

2005 620:21 625:21 799:9,20 824:4

2010 748:6,18 753:13

2014 731:18 733:5 735:6 737:17 738:7

2014-0207 734:2



736:14 2016 737:19 808:24 809:16,18 2017 810:14,23 2018 746:23 2018 746:23 2019 746:20,23 753:57,9,22,23, 24 754:2,5 2020 647:16,19 745:25 746:4,8, 11,16,22 747:9, 12,16 748:6,18 749:18 750:23 752:1,4,25 753:3, 4,9,13,18,22 752:1,4,25 753:3, 4,9,13,18,22 752:2,754:2,5,6,14,15, 23 755:9 2021 744:18 753:20 755:9 2022 691:14,17 2023 647:20 702:17,18 2026 647:22,24 648:2 21 641:2 691:14, 17 702:18 703:22, 24 704:1 711:2,24 22 752:2,24 704:1 784:12 691:14, 17 702:18 703:22, 24 704:1 711:2,24 22 703:2,24 704:1 784:12 808:4 22.7 784:16 22.8 784:16 23.8 756:12 24 700:14, 23 250 597:8 250 607:9 657:2 685:4 756:8 36 693:5 36 693:5 36 693:5 36 676:2 369 676:7,8 369 676:7,8 33:35 736:25 369 676:7,8 3:35 736:25 500 699:8 523.010 620:23 524 704:17 524 703:2 4 4 642:7 674:12 676:23 25 680:17 68:117 693:2 4 4 642:7 674:12 676:23 25 680:17 68:117 693:2 4 4 642:7 674:12 676:23 25 680:17 68:117 693:2 4 4 642:7 674:12 676:23 25 680:17 68:117 693:2 4 4 642:7 674:12 676:23 25 680:17 68:117 693:2 4 4 642:7 674:12 676:23 25 680:17 68:117 693:2 679:13 680:23 679:13 680:10 578 645:6,14,16 676:1 579:13 680:24 779:11 693:2 579:13 680:24 779:11 693:2 579:13 680:24 779:14 76:24 779:14 76:24 779:14 767:14 779:12 779:14 779:12 779:14 779:13 779:14 779:14 767:14 779:14 779:14		Transcript of	Proceedings J	une 07, 2023Index: 20157
2016 737:19 18,24 686:12 735:13 736:19 34 763:2 5.1 773:14 5.3 792:1 793:2 5.3 792:1 793:2 5.0 607:9 657:23 685:4 756:8 5.0 606:1,2 5.0 606:1,2 5.0 606:1,2 5.0 606:1,2 5.0 00 606:1,2 5.0 00 606:1,2 5.0 00 606:1,2 5.0 00 606:1,2 5.0 00 606:1,2 5.0 00 606:1,2 5.0 00 606:1,2 5.0 00 606:1,2 5.0 00 606:1,2 5.0 00 606:1,2 5.0 00 606:1,2 5.0 00 606:1,2 5.0 00 606:1,2 5.0 00 606:1,2 5.0 00 606:1,2 5.0 00 606:1,2 5.0 00		648:7 672:7,12,		5-gallon 766:24 767:14
2017 810:14,23 2018 746:23 2018 746:20,23 753:52,24 2019 746:20,23 753:5,7,9,22,23, 24 754:2,5 2020 647:16,19 2705 702:7 29 741:20 21,16 748:6,18 749:18 750:23 752:1,4,25 753:3, 4,9,13,18,22 754:2,5,6,14,15, 23 755:9 2021 744:18 753:20 755:9 2022 691:14,17 2023 647:20 702:17,18 2026 647:22,24 648:2 205 797:1 823:24 824:4 21 641:2 691:14, 17 702:18 703:22, 24 704:17 711:2,24 22 702:18,19 703:22,24 704:1 784:12 808:4 21 641:2 691:14, 17 703:22,24 704:1 784:12 808:4 22 702:18,19 703:22,24 704:1 784:12 808:4 22 666:12 204 767:23 205 763:14 259 810:4 35 763:14 36 693:5 366 676:2 369 676:7,8 369 676:7,8 369 676:7,8 369 676:7,8 369 676:7,8 369 676:7,8 369 676:7,8 369 676:7,8 369 676:7,8 369 676:7,8 364 676:2 369 676:7,8 369 676:7,8 369 676:7,8 364 676:2 369 676:7,8 369 676:7,8 369 676:7,8 369 676:7,8 369 676:7,8 364 676:2 369 676:7,8 369 676:7,8 364 676:2 369 676:7,8 364 676:2 369 676:7,8 366 676:2 369 676:7,8 366 676:2 369 676:7,8 366 676:2 369 676:7,8 373:11,12,12 462:769:11 46				5.1 773:14
2018 746:23 753:22,24 2019 746:20,23 753:57,9,22,23, 24 754:2,5 2020 647:16,19 745:25 746:4,8, 11,16,22 747:9, 12,16 748:6,18 749:18 750:23 752:1,4,25 753:3, 4,9,13,18,22 754:2,5,6,14,15, 23 755:9 2021 744:18 753:20 755:9 2022 691:14,17 2023 647:20 702:17,18 2026 647:22,24 648:2 205 797:1 823:24 703:22,24 704:1 71702:24 703:6 749:12 752:1 205 797:1 823:24 21 641:2 691:14, 21 641:2 691:14, 21 703:22,24 704:1 770			345 614:6	5.3 792:1 793:24
753:22,24 2019 746:20,23 753:5,7,9,22,23, 24 754:2,5 2020 647:16,19 745:25 746:4,8, 11,16,22 747:9, 12,16 748:6,18 749:18 750:23 752:1,4,25 753:3, 4,9,13,18,22 754:2,5,6,14,15, 23 755:9 2021 744:18 753:20 755:9 2022 691:14,17 702:24 703:6 706:23 807:17 2023 647:20 702:17,18 2026 647:22,24 648:2 21 641:2 691:14, 17 702:24 703:6 749:12 752:1 21 641:2 691:14, 17 702:24 703:6 749:12 752:1 21 641:2 691:14, 17 702:24 703:6 749:12 752:1 22 702:18,19 703:22,24 704:1 784:12 808:4 22 702:18,19 703:22,24 704:1 784:12 808:4 22 702:18,19 703:22,24 704:1 784:12 808:4 22 702:18,19 703:22,24 704:1 784:12 808:4 21 641:2 691:14, 755:9 756:9 756:9 756:9 756:9 756:9 756:9 756:9 756:9 756:9 756:9 756:9 756:19 616:13, 17 619:2,3 668:23 669:24 670:9 598:5 634:15 676:23 686:12 500 606:1,2 5000 597:8 523.010 620:23 52.010 66:12 52.010 67:22 52.02 704:15 66:11,1,1,1,	·	259 810:4	35 763:14	50 607:9 657:23
2019 746:20,23 753:5,7,9,22,23, 24 764:2,5 27 724:11 748:15 755:19 784:11 755:19 784:11 755:19 784:11 755:19 784:11 755:19 784:11 755:19 784:11 755:19 784:11 755:19 784:11 755:19 784:11 755:19 784:11 755:19 784:11 749:18 750:23 752:1,4,25 753:3, 4,9,13,18,22 754:2,5,6,14,15, 23 755:9 20 630:8 26 676:7,8 3:35 736:25 7300 606:1,2 702:24 703:7 731:9,11 734:3 808:10 7		261 810:5	36 693:5	
24 754:2,5 755:19 784:11 3:35 736:25 500 606:1,2 2020 647:16,19 745:25 746:4,8, 11,16,22 747:9, 12,16 748:6,18 749:18 750:23 752:1,4,25 753:3, 4,9,13,18,22 754:2,5,6,14,15, 23 755:9 2a 618:3,4,9 2c 630:8 4 523.010 620:23 526 709:14 819 22 676:23,25 680:17 684:17 693:24 702:24 703:7 731:9,11 734:3 808:10 526 709:14 819 22 53.8 691:15 692:25 53.8 691:15 692:25 736:19 54 642:7 674:12 676:23,25 680:17 684:17 693:24 702:24 703:7 731:9,11 734:3 808:10 55 8 691:15 692:25 53.8 691:15 692:25 53.8 691:15 692:25 736:19 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 676:23 807:17 731:9,11 734:3 808:10 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 676:1 578 645:6,14,16 676:1 676:23 685:14 676:23 686:23 669:20,24 670:9, 10,11,12,17,23 6778:15,16 674:6, 676:23 685:14 676:23 685:14 676:23 685	· · · · · · · · · · · · · · · · · · ·			50-year 608:6,12
2020 647:16,19 745:25 746:4,8, 11,16,22 747:9, 12,16 748:6,18 749:18 750:23 752:1,4,25 753:3, 4,9,13,18,22 754:2,5,6,14,15, 23 755:9 20 618:3,4,9 4 523.010 620:23 526 709:14 819 22 526 709:14 819 22 526 709:14 819 22 53.8 691:15 69;25 53.8 691:15 69;25 702:24 703:7 731:9,11 734:3 808:10 53.8 691:15 69;25 54 592:5 690:25 736:19 54 592:5 690:25 736:19 55 736:19 55 736:19 55 736:19 57 8 645:6,14,16 676:1 57 8 645:6,14,16 676:1 57 8 645:6,14,16 676:1 67 79:14 57 8 645:6,14,16 676:1 67 9:15 58 6 707:9 5:05 795:8 5 11 9 50:1 500 67:1 500 67:1 500 67:1 67 9:11 57 8 645:6,14,16 676:1 67 9:11 57 8 645:6,14,16 676:1 67 9:11 57 8 645:6,14,16 676:1 67 9:11 57 95:8 5 615:19 616:13,17 676:23 668:23 5 615:19 616:13,17 676:23 668:23 67 6:23 668:23 669:20,24 670:9,17 702:17,723 664:21,23 665:16 724:21 725:4 <td></td> <td>•</td> <td>,</td> <td>500 606:1,2</td>		•	,	500 606:1,2
11,16,22 747:9, 12,16 748:6,18 749:18 750:23 752:1,4,25 753:3, 4,9,13,18,22 754:2,5,6,14,15, 23 755:9 2021 744:18 753:20 755:9 2022 691:14,17 702:24 703:6 706:23 807:17 810:1,7 2023 647:20 702:17,18 2026 647:22,24 648:2 702:24 703:2 14 597:16 205 797:1 823:24 824:4 3.5 753:25 27 703:22,24 704:1 711:2,24 824:4 3.5 753:25 27 703:22,24 704:1 711:2,24 824:4 3.5 753:25 27 703:22,24 704:1 711:2,24 824:4 3.5 753:25 27 703:22,24 704:1 711:2,24 824:4 3.5 753:25 30.6 609:608:23 647:25 648:7 664:21,23 665:16 724:21 725:4 703:22,24 704:1 711:2,24 824:1 824:1 808:4 300 606:9 608:23 652:9 716:16,18 734:15, 20,21 747:23 673:15,16 674:6, 11,13,14,15 703:9 716:16,18 734:15, 20,21 747:23 673:13 680:28,8,15 686:12 75.47 707:1 55.47 707:1 55.47 707:1	·	2705 702:7	3:35 736:25	5000 597:8
12,16 748:6,18 2a 618:3,4,9 4 642:7 674:12 526 709:14 819 749:18 750:23 752:1,4,25 753:3,49,13,18,22 4,913,18,22 754:2,5,6,14,15,23 755:9 26 679:11 684:17 693:24 702:24 703:7 731:9,11 734:3 54 592:5 690:26 54 592:5 690:26 54 592:5 690:26 736:19 55 736:19 55 736:19 55 736:19 57 8645:6,14,16 676:1 57 8645:6,14,16 676:1 57 8645:6,14,16 676:1 57 8645:6,14,16 676:1 57 8645:6,14,16 676:1 57 86:19 57 8645:6,14,16 676:1 57 86:19 57 8645:6,14,16 676:1 58 6707:9 505 795:8 505 795:8 505 795:8 505 795:8 5:15 795:11 56 709:14 819 676:1 58 6707:9 505 795:8 505 795:8 505 795:8 505 795:8 505 795:8 5:15 795:11 505 795:8 5:15 795:11 66 591:18 597:26 598:5 634:15 66 591:18 597:26 598:5 634:15 66 591:18 597:26 598:5 634:15 676:12 66 591:18 597:26 598:5 634:15 676:12 66 591:18 597:26 598:5 634:15 66 591:18 597:26 598:5 634:15 66 591:18 597:26 598:5 634:15 676:23,25 686:14 66 591:18 597:26 598:5 634:15 676:12 598:5 634:15 <td>· ·</td> <td>29 741:20</td> <td>4</td> <td>523.010 620:23</td>	· ·	29 741:20	4	523.010 620:23
749:18 750:23 2c 630:8 676:23,25 680:17 53.8 691:15 692 752:1,4,25 753:3, 4,9,13,18,22 3 676:23,25 680:17 53.8 691:15 692 54 592:5 690:28 736:19 55 736:19 55 736:19 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 5795:18 586 707:9 5:05 795:8 5:05 795:8 5:05 795:8 5:15 795:11 6 6 591:18 597:25 598:5 634:15 6 65:98:5 634:15 66:29 64:21,23 666:23 66:29 64:21,23 666:16 676:23 685:14 691:11 723:7 724:11 60 691:4 692:8 676:23 685:14 691:11 723:7	· · ·	2a 618:3,4,9	1 642:7 674:12	526 709:14 819:7,
4,9,13,18,22 754:2,5,6,14,15, 23 755:9 3 684:17 693:24 703:7 731:9,11 734:3 808:10 54 592:5 690:26 736:19 2021 744:18 753:20 755:9 3 654:11 659:20 660:13 684:17 702:24 703:6 706:23 807:17 810:1,7 4.1 746:2 4.2 693:11 694:7 44.2 693:11 694:7 44.2 693:11 694:7 49:12 752:1 578 645:6,14,16 676:1 578 645:6,14,16 676:1 2026 647:22,24 648:2 205 797:1 823:24 824:4 8		2c 630:8		
764:2,5,6,14,15, 23 755:9 3 731:9,11 734:3 808:10 736:19 2021 744:18 753:20 755:9 3 654:11 659:20 660:13 684:17 702:24 703:6 706:23 807:17 810:1,7 4.1 746:2 4.2 693:11 694:7 578 645:6,14,16 676:1 2023 647:20 702:17,18 30:11,7 40 713:12 763:23, 24 648:2 324 824:4 586 707:9 5:05 795:8 2026 647:22,24 648:2 3.2 748:6,13,16 749:12 752:1 401k 728:23 729:4 44 597:16 5:05 795:8 5:05 795:8 205 797:1 823:24 824:4 3.4 753:12 3.5 753:25 5 615:19 616:13, 17 619:2,3 668:23 669:20,24 670:9, 10,11,12,17,23 669:20,24 670:9, 10,11,12,17,23 669:20,24 670:9, 10,11,12,17,23 669:20,24 670:9, 10,11,12,17,23 669:20,24 670:9, 10,11,12,17,23 724:11 6 691:14 692:8 691:14 692:8 61704 702:8 61704	4,9,13,18,22	2f 679:11		
2021 744:18 753:20 755:9 3 654:11 659:20 660:13 684:17 702:24 703:6 706:23 807:17 810:1,7 4.1 746:2 4.4.2 693:11 694:7 40 713:12 763:23, 24 578 645:6,14,16 676:1 2023 647:20 702:17,18 706:23 807:17 810:1,7 40 713:12 763:23, 24 586 707:9 5:05 795:8 2026 647:22,24 648:2 3.2 748:6,13,16 749:12 752:1 40 1k 728:23 729:4 44 597:16 5:15 795:11 205 797:1 823:24 824:4 3.4 753:12 3.5 753:25 5 5 21 641:2 691:14, 17 702:18 703:22, 24 704:1 711:2,24 649:15 646:23 647:25 648:7 664:21,23 665:16 724:21 725:4 756:9 5 615:19 616:13, 17 619:2,3 668:23 669:20,24 670:9, 10,11,12,17,23 673:15,16 674:6, 11,13,14,15 703:9 716:16,18 734:15, 20,21 747:23 748:4,12 749:2,10 778:11,12,16,19, 24 784:4 60 691:4 692:8 61704 702:8 22.8 784:16 303 733:17 304 738:24 679:13 680:2,8,15 686:12 304 738:24 3758:15 763:2 7591:3,21 598: 684:16 691:12		3	731:9,11 734:3	
2022 691:14,17 660:13 684:17 2023 647:20 706:23 807:17 702:17,18 810:1,7 2026 647:22,24 3.2 748:6,13,16 648:2 749:12 752:1 205 797:1 823:24 3.4 753:12 824:4 3.5 753:25 21 641:2 691:14, 17 702:18 703:22, 24 704:1 711:2,24 30 619:15 646:23 646:23 664:22 647:25 648:7 664:21,23 665:16 724:21 725:4 756:9 5 615:19 616:13, 17 619:2,3 668:23 669:20,24 670:9, 10,11,12,17,23 673:15,16 674:6, 11,13,14,15 703:9 756:9 66 65:20,24 670:9, 10,11,12,17,23 673:15,16 674:6, 11,13,14,15 703:9 716:16,18 734:15, 20,21 747:23 748:4,12 749:2,10 778:11,12,16,19, 24 784:4 60 691:4 692:8 61704 702:8 61704 702:8 68:12 24 671:24 672:2,6, 18,23 674:23 679:13 680:2,8,15 686:12 303 758:15 763:2 305 745:4 5,000 671:4 5,000 671:4 5,747 707:1 7 591:3,21 598:684:16 691:12				55 736:19
2022 691:14,17 702:24 703:6 4.4.2 693:11 694:7 576:1 2023 647:20 706:23 807:17 810:1,7 40 713:12 763:23, 24 586 707:9 2026 647:22,24 648:2 3.2 748:6,13,16 749:12 752:1 401k 728:23 729:4 5:05 795:8 205 797:1 823:24 824:4 3.4 753:12 44 597:16 5:15 795:11 205 797:1 823:24 824:4 3.6 619:15 646:23 647:25 648:7 664:21,23 665:16 724:21 725:4 756:9 5 615:19 616:13, 17 619:2,3 668:23 669:20,24 670:9, 10,11,12,17,23 724:11 66:23 685:14 691:11 723:7 724:11 22 702:18,19 703:22,24 704:1 784:12 808:4 300 606:9 608:23 652:9 673:15,16 674:6, 11,13,14,15 703:9 716:16,18 734:15, 20,21 747:23 748:4,12 749:2,10 778:11,12,16,19, 24 784:4 60 691:4 692:8 61704 702:8 61704 702:8 61704 702:8 684:16 691:12 22.8 784:16 869:13 679:13 680:2,8,15 686:12 304 738:24 305 745:4 305 745:4 33 758:15 763:2 5747 707:1 7 591:3,21 598: 684:16 691:12	753:20 755:9		_	578 645:6,14,16
2023 647:20 702:17,18 810:1,7 24 5:05 795:8 2026 647:22,24 3.2 748:6,13,16 749:12 752:1 401k 728:23 729:4 5:15 795:11 205 797:1 823:24 3.4 753:12 44 597:16 5 21 641:2 691:14, 17 702:18 703:22, 24 704:1 711:2,24 30 619:15 646:23 647:25 648:7 664:21,23 665:16 724:21 725:4 5 615:19 616:13, 17 619:2,3 668:23 669:20,24 670:9, 10,11,12,17,23 673:15,16 674:6, 11,13,14,15 703:9 724:11 60 691:4 692:8 22 702:18,19 703:22,24 704:1 784:12 808:4 300 606:9 608:23 652:9 10,11,12,17,23 673:15,16 674:6, 11,13,14,15 703:9 716:16,18 734:15, 20,21 747:23 748:4,12 749:2,10 778:11,12,16,19, 24 784:4 60 691:4 692:8 22.7 784:16 24 671:24 672:2,6, 18,23 674:23 679:13 680:2,8,15 686:12 304 738:24 3756:40 77 591:3,21 598: 684:16 691:12 24 671:24 672:2,6, 18,23 674:23 669:11 305 745:4 5,000 671:4 7 591:3,21 598: 684:16 691:12	2022 691:14,17			
2026 647:22,24 648:2 3.2 748:6,13,16 749:12 752:1 401k 728:23 729:4 5:15 795:11 205 797:1 823:24 824:4 3.4 753:12 44 597:16 6 21 641:2 691:14, 17 702:18 703:22, 24 704:1 711:2,24 30 619:15 646:23 647:25 648:7 664:21,23 665:16 724:21 725:4 756:9 5 615:19 616:13, 17 619:2,3 668:23 669:20,24 670:9, 10,11,12,17,23 673:15,16 674:6, 11,13,14,15 703:9 716:16,18 734:15, 20,21 747:23 748:4,12 749:2,10 778:11,12,16,19, 24 784:4 60 691:4 692:8 22.8 784:16 303 733:17 78:11,12,16,19, 24 784:4 61704 702:8 24 671:24 672:2,6, 18,23 674:23 679:13 680:2,8,15 686:12 305 745:4 7 7 7 5000 671:4 691:3,21 598: 684:16 691:12			· ·	
648:2 749:12 752:1 44 597:16 205 797:1 823:24 3.4 753:12 5 824:4 3.5 753:25 5 21 641:2 691:14, 17 702:18 703:22, 24 704:1 711:2,24 30 619:15 646:23 647:25 648:7 664:21,23 665:16 724:21 725:4 756:9 5 615:19 616:13, 17 619:2,3 668:23 669:20,24 670:9, 10,11,12,17,23 669:20,24 670:9, 10,11,12,17,23 673:15,16 674:6, 11,13,14,15 703:9 724:11 60 691:11 723:7 724:11 22 702:18,19 756:9 300 606:9 608:23 652:9 673:15,16 674:6, 11,13,14,15 703:9 716:16,18 734:15, 20,21 747:23 748:4,12 749:2,10 778:11,12,16,19, 24 784:4 60 691:4 692:8 61704 702:8 61704 7		3.2 748:6,13,16	401k 728:23 729:4	
203 797.1 823.24 3.5 753:25 5 21 641:2 691:14, 17 702:18 703:22, 24 704:1 711:2,24 30 619:15 646:23 647:25 648:7 664:21,23 665:16 724:21 725:4 756:9 5 615:19 616:13, 17 619:2,3 668:23 669:20,24 670:9, 10,11,12,17,23 673:15,16 674:6, 11,13,14,15 703:9 716:16,18 734:15, 20,21 747:23 724:11 66 591:18 597:28 598:5 634:15 676:23 685:14 691:11 723:7 724:11 22 702:18,19 703:22,24 704:1 784:12 808:4 300 606:9 608:23 652:9 10,11,12,17,23 673:15,16 674:6, 11,13,14,15 703:9 716:16,18 734:15, 20,21 747:23 748:4,12 749:2,10 778:11,12,16,19, 24 784:4 60 691:4 692:8 61704 702	· · · · · · · · · · · · · · · · · · ·		44 597:16	
21 641:2 691:14, 17 702:18 703:22, 24 704:1 711:2,24 30 619:15 646:23 647:25 648:7 664:21,23 665:16 724:21 725:4 756:9 5 615:19 616:13, 17 619:2,3 668:23 669:20,24 670:9, 10,11,12,17,23 673:15,16 674:6, 11,13,14,15 703:9 716:16,18 734:15, 20,21 747:23 748:4,12 749:2,10 66 591:18 597:28 598:5 634:15 676:23 685:14 699:20,24 670:9, 10,11,12,17,23 673:15,16 674:6, 11,13,14,15 703:9 716:16,18 734:15, 20,21 747:23 748:4,12 749:2,10 66 591:18 597:28 598:5 634:15 676:23 685:14 699:20,24 670:9, 10,11,12,17,23 673:15,16 674:6, 11,13,14,15 703:9 716:16,18 734:15, 20,21 747:23 748:4,12 749:2,10 67 591:18 597:28 598:5 634:15 676:23 685:14 699:20,24 670:9, 10,11,12,17,23 673:15,16 674:6, 11,13,14,15 703:9 716:16,18 734:15, 20,21 747:23 748:4,12 749:2,10 67 591:18 597:28 598:5 634:15 676:23 685:14 699:20,24 670:9, 10,11,12,17,23 673:15,16 674:6, 11,13,14,15 703:9 716:16,18 734:15, 20,21 747:23 748:4,12 749:2,10 67 591:3 598:5 634:15 676:23 685:14 699:11 723:7 724:11 22.8 784:16 303 733:17 304 738:24 77 78:11,12,16,19, 24 784:4 7 591:3,21 598:684:16 691:12 24 671:24 672:2,6, 18,23 679:13 680:2,8,15 686:12 33 758:15 763:2 5,000 671:4 7 591:3,21 598:684:16 691:12				6
1 22 4/2 750.40 3./4/ /U/.1	17 702:18 703:22, 24 704:1 711:2,24 22 702:18,19 703:22,24 704:1 784:12 808:4 22.7 784:16 22.8 784:16 24 671:24 672:2,6, 18,23 674:23 679:13 680:2,8,15	647:25 648:7 664:21,23 665:16 724:21 725:4 756:9 300 606:9 608:23 652:9 303 733:17 304 738:24 305 745:4	17 619:2,3 668:23 669:20,24 670:9, 10,11,12,17,23 673:15,16 674:6, 11,13,14,15 703:9 716:16,18 734:15, 20,21 747:23 748:4,12 749:2,10 778:11,12,16,19, 24 784:4 5,000 671:4	598:5 634:15 676:23 685:14 691:11 723:7 724:11 60 691:4 692:8 61704 702:8 6:57 848:6 7
746:2		33-1/3 756:19	5,/4/ /0/:1	746:2



7.6 709:14 719:12 819:7,22 **70** 646:11,12 664:20 669:11,15, 21 **70,000** 674:15 **72** 591:23 592:1 **75** 685:4 8 **8** 598:10 662:1 681:22 691:12 706:20 796:25 797:25 818:4,11 837:2,11,13 **80** 615:25 669:7, 13,21 713:13 **80,000** 616:18 670:18 673:17 **800** 683:25 **87** 645:11,17 646:3.8 664:19 693:5 **8:30** 847:8 848:6 **8:35** 591:1 9 **9** 596:9 614:20 617:6 681:1 709:11 719:8 819:4,9,17 820:2, 4,5,6,9 821:14 840:2,4,5 **90** 619:16 Α **a.m.** 591:1 848:6

Aaron 594:12

611:19.23 614:5 677:19 683:13 **Aaron's** 683:24 **AB-2** 693:1 abbreviation 624:17 662:10 **ability** 605:12 634:16 664:15 705:16 751:20 755:2 782:21 828:16 829:12 835:16 absolute 748:10, 11 749:13 782:3 785:19 absolutely 770:23 845:21 abuse 770:21 **AC** 649:15 academic 785:6, 18,24 academics 776:19 access 631:1.4 632:1 653:9 799:1 835:19 accessible 682:19 accessing 679:14 accidents 730:15 accommodations 655:17 accompanying 702:16 accomplished 603:5 accordance 603:6 account 605:1 708:21 710:14 726:18.21 728:25 750:12 751:5,24

765:13 773:20 774:8,9,12 775:19,22,23 777:24 827:13 accountability 639:17,19 640:9 accountable 640:17 641:9 accountants 761:7 accounting 700:16 708:13 760:11 783:7 accounts 700:16 accreditation 816:7 accredited 815:20,23 accuracy 754:23 accurate 649:23, 24 698:8,10 709:16 713:17 746:12 759:24 777:12,15,16 810:5 accurately 785:9, 21 achieve 685:1 achieved 684:17 acquiesce 625:20 658:11 acquired 647:17 676:7,8,12,16,25 690:21 691:3,19 acquisition 598:11,18 599:5,9 601:3 684:18.20 685:1 809:13 811:4 827:15 acre 593:25 650:8 675:9 687:16,17

770:2.4.7 acreage 774:21 acres 769:6,7,9 770:5,6 action 628:19 630:4 633:3 actions 661:25 actively 751:16 activities 662:2,7, 19 663:10,13 activity 598:25 599:4,5 766:3 767:6,20 769:18 771:3,5 774:9 775:6,25 779:10 780:16 actual 598:17 600:24 620:10 632:1 748:8,14 780:7 add 714:25 725:9 733:2 781:22 782:13,22 788:20 815:15 added 718:14 778:24 816:10 adding 782:22 addition 649:4 693:16 709:12,17 719:10 727:2 728:13 815:22 817:10 additional 592:14 648:13 652:11 667:13 679:1,5 709:13 719:11 733:22,24 734:11 740:6 781:23 790:6 819:5,18,20 829:15 835:17 additions 682:24



702:21 703:4,14 833:22 additive 770:1 **address** 618:5 652:18 657:13 666:4 702:5,7 821:16 837:5,15 addressed 622:12 655:2 793:8 810:23 818:9 addressing 820:14 adds 733:1 816:17 adequacy 820:10 adequately 697:5 adjourned 637:12 adjourns 637:6 adjudicated 809:19 adjusted 753:14 adjustment 686:7 adjustments 658:7,9,19 689:13 administrative 731:2 739:11 admit 703:24 733:16 739:3 799:2 826:1 834:9 admitted 733:6 745:5 adopted 819:3 **advance** 679:13 680:7,8,16 779:25 advanced 666:21 672:4,8 679:19,25 684:18,20 689:3 adversely 658:5 **AECI** 713:2

affairs 600:15,16 754:4 affect 658:5 688:6 759:25 affected 609:1 717:4 **affirm** 701:13 795:18 824:14 832:5 affirmative 632:4 afternoon 701:23 704:18,20 706:12, 13 788:3,5 807:12 **Ag** 599:20 677:2 800:10 **Agathen** 591:6,7, 8,11,17 596:3 598:24 599:18 643:6,9 690:15,18 692:2,10 706:11, 15 711:15,18,21, 23 712:5,22 713:5 716:3,11 718:24 719:6,19,22 725:20,22 729:11, 24 731:1,9,24,25 732:17,20 733:11, 13,19,25 734:1,5, 11,12,13 735:12, 20,21 736:1,2 737:7,11,12,22 738:13 739:7,8,16 740:7,8,13,22,25 741:4 742:4,10,13 743:4 744:1,4,9, 14,25 745:8,9 792:25 794:16 800:9 821:24 826:9 829:18 Agathen's 713:3 738:5 741:13 agenda 637:5,8,12 agents 624:10

666:11 760:10 aggregate 782:19 aggressive 656:14 **agree** 595:25 614:14 624:18 629:19,20 639:14 699:12 712:10 721:9,18 726:15 732:24 754:6 764:13 786:22 835:5 841:7 **agreed** 613:22 agreeing 718:5 727:2 agreement 593:12 624:3,9,11,25 625:1,25 626:9 627:2 629:24,25 645:12 646:21 647:3 648:1,8,12 649:10 650:3,15 651:7 661:4 664:20,24 680:17 685:17 686:2,10, 16 688:12,18 758:22 814:1,4,22 815:9,10 agreements 646:25 660:8 661:9,21 666:2 685:12,16,19,23 689:1 796:23 797:2 838:16 840:16 agricultural 649:18,22 651:22 652:1,6 654:23 659:5 663:17 667:2 668:19 680:23 681:15 682:12 697:14,23 700:20 agriculture 667:25

668:3,6,9 692:12 745:11 821:25 826:10 829:19 **ah-ha** 781:19 **ahead** 591:7 608:11 622:22 623:6 637:9,19 644:6,7 666:7 673:3 678:10,12, 13,16 680:5 738:3,24 742:23 795:22 801:14 824:21 836:9 838:10 845:9 846:1,4 air-conditioning 662:23 aisle 824:12 **Alan** 845:16,21,23 847:12 alleviated 813:24 814:9 alleviates 812:25 813:10 **Alliance** 704:13 800:22 822:11 826:20 830:5 **allowed** 596:11 722:15,18 737:23 allowing 699:11 alphabetically 761:5 alter 632:19 633:1 alternative 746:19 776:13 alternatively 630:25 amazing 611:8 amended 620:22, 23 731:20 817:5 829:5



	•		
amendments	and/or 681:2	681:13,25	arguments 622:19
817:17	799:16 820:24	application	623:13
	844:6	application	
amends 653:20		622:13 737:19	arise 694:25
Ameren 635:3,6,	Andrew 602:25	applied 675:14	arrears 755:8
22 638:2,14	annual 615:4,12,	applies 773:7	arrive 594:15
639:15 640:17,18	15,19 616:8	• •	595:7 772:13
722:6,10,17,20	619:12 650:20,23,	apply 620:21	055.7 772.15
723:2 724:2	25 651:2,14	622:5,7	article 791:12
_	661:10 666:25		
amount 592:12,14		applying 669:18	articles 785:12
593:6,22 619:3	668:23 670:10,23,	appreciated 745:7	articulate 799:15
657:19 662:18,20	25 695:22 725:13		
663:6 664:9	annualize 763:23	approach 697:8 773:1	artifact 746:12
714:12,19 718:22	annualized 756:17		aspect 602:19
728:2 730:7	758:14 783:5	approval 598:6	assessment 657:2
768:15 794:24	700.14 700.0	649:1	709:16
816:4,10 820:12	annually 615:21		709.16
831:6 837:18	651:12 674:17	approvals 809:7,8	asset 718:6
		810:19	
analyses 734:16	annuitized 669:17	approved 593:18	assign 788:18,19
784:4	answering 594:9	599:11 672:11	assigned 601:17
analysis 594:18,	answers 611:10	686:8 808:11,22	Associated's
20 602:23 622:10	699:3 703:19		713:22 800:16
688:6,8 689:22	731:14 798:11,13	approximately	7 13.22 000.10
690:7,9 708:23	· ·	591:23 645:13	Association
709:21 710:15	801:18,19 824:12	691:3 692:8	668:20 694:19
	825:18,20 834:1,3	709:14 719:12	
715:16,20,25	anticipate 594:11	819:7,22	Associations
716:10,13 718:12	645:18 646:15	·	599:20 677:3
726:5,6 731:18		arbitrary 674:25	692:12 700:21
735:10 740:11	675:6 677:5	675:3	745:11 800:10
741:16 744:19	anticipated 652:5	0700 600:16 607:0	822:1 826:10
748:3,17 752:5,	_	area 622:16 627:9	829:19
•	apologies 672:22	652:4 654:8	629.19
15,19 753:7,9	apologize 637:25	713:22 764:22	assume 593:24
758:7,17 760:5		768:14 818:21	595:21 619:8
777:5 787:16	676:19 684:3	0FC:22	740:23 761:23,25
790:17 792:18,24	742:4,13 749:4	areas 656:23	766:20 768:18
793:9,13 796:10	816:16 819:14	711:6 712:2 713:3	
820:6 825:7	apparently 670:10	720:14 788:24	773:15 840:12
831:4,7,11 835:9	apparently 679:10	argued 633:9	assumed 720:12
843:2	appeal 809:19	argued 033.9	790:16,17 813:22
043.2		arguing 621:14	'
analyze 777:12	appeals 739:20,21	625:16	844:4
820:18	appears 741:17		assumes 639:19
	743:1 744:17	argument 626:15	708:1 716:2
analyzed 603:21		733:12	718:13 724:12
611:17	817:13	argumentativa	750:10 837:23
analyzina 777:40	applicable 662:8	argumentative	150.10 031.23
analyzing 777:13	668:10 680:9	613:4 639:20	assuming 613:23
	0000	771:19	



630:1 672:10 679:21 709:19 712:20 717:12 719:23 720:3 732:9 739:21 747:10 756:17,19 772:16 814:3 838:21,22,24 839:14 assumption 595:7 626:15 661:6 697:1 717:15 757:12,14,18 759:19 783:18 794:12 assumptions 756:3 759:15 760:25 761:1.2 763:6 770:13 771:13,21 777:16 838:25 839:2,13, 21 840:6,15,18,22 844:5 assurances 660:3 assure 801:20 ate 764:24 765:5 attached 617:18 618:24 680:20 685:13 734:22 812:23 attachment 735:4 attachments 671:10 672:16 attempt 627:3 679:16,23 697:10 738:6 attempted 620:20 attempting 767:19 attempts 679:22 **attend** 637:3

attending 654:15

attenuated 780:13 attorney 607:1 608:9,25 623:17 627:8 628:7,10 642:3 651:20 653:18 660:18 682:10 742:8 772:23 800:16 attorney/client 606:17 attorneys 607:6 609:9 742:5,11, 18,21 760:10 802:3 attractive 750:13 attributed 703:11 attributes 729:13 768:16 835:14 841:22 **atypical** 746:8,13 752:25 auction 840:7 **Audrain** 755:23 756:5 758:15.25 761:3,4,9,13,16 763:12 784:10,12, 16 792:4 **Audrain-callaway** 755:24 authored 743:2 744:3,17 authoring 746:19 authority 620:25 634:17 661:1 667:7 842:10 authorized 801:24

averaged 763:1 avoid 592:22 593:20 603:18,23 605:10.11 607:8 608:5 612:13 655:10 656:24 657:11,17 avoided 655:20 820:23,24 821:5,7 avoiding 657:6 avoids 655:21 683:4 **aware** 597:15 598:14,22,23 607:11,22 609:20 613:19,25 629:9 632:3 655:21 677:12 678:1 682:17,18,19,25 687:12,19,22 690:9 693:17 694:3,18,23 724:7 728:8 742:12 786:25 809:20 813:2 833:24 842:23 844:7 846:14 В

back 591:3 595:23 601:21 602:7 606:3,5 607:22,25 618:19 621:3 623:10 631:7 635:10 637:10,14, 15 649:7,11 673:11 675:25 677:2 678:17,24 680:25 688:21

713:8,24 717:20 718:1 719:8 736:3 737:4 745:20

747:23 749:11,18 752:17 764:8 773:12 779:7,20 780:5,20 785:2 794:5 795:11,14 823:21 846:6 847:20

background 600:20 624:18

backgrounds 699:23

backward 782:8, 17

backwards 755:18 779:1

bad 670:20

Baker 839:23 840:13

Baker's 837:2,8 840:2

balance 615:3,20 619:3 647:5,9,22 648:2,13,15 650:19 665:10 668:22 669:2,7, 15,22 670:12,18, 23 673:17 767:7

balances 782:12

ballpark 636:16

bare 620:7

base 722:15,18 725:7

based 592:10 623:13 633:6 651:4 675:6 684:1 686:22 689:17 690:14 693:20 695:16 698:15,19, 24 700:7,12 712:3 721:14 724:25 734:14 748:10 756:3 770:22 771:21,23 787:13 791:3 799:21



automatically

average 674:25

675:1,4 683:20

687:13,15

700:20

817:11,24 818:16 821:22 829:16 838:7 **basic** 813:14 basically 669:10 680:2 815:24 816:2 834:24 **Basin** 714:6,9 **basis** 635:19 640:12 652:20 770:2,4 **Bax** 845:17,22,23, 25 846:4,6 847:12 bear 676:5 747:12 **beauties** 761:17 **becauses** 639:24, 25 began 591:1 647:15 begin 596:11,16 634:23 658:7 679:18 683:2 761:10 795:9,16 848:6 beginning 591:21 596:9 627:16 632:13 711:1.2.23 716:19 807:20 **begins** 615:19 736:15 behalf 602:25 743:15 834:24 **belief** 631:24 798:14 825:21 834:4 **believes** 714:12 **Belt** 591:22 592:8, 11,22 596:11,15 597:4,9,12 598:6.

15 599:8,14

600:13,15,25

601:2,19 610:18 613:2 614:12,14, 21 624:23 627:18 634:16,17 636:11, 20 638:3 639:3,10 643:12 654:7,9 659:9,20 660:14 661:7 662:17 666:10,11 667:3 669:6,13,22 677:5,21 679:12 682:15,20 684:18 685:11 690:25 691:13,15 695:23 697:16,20,24 708:14,22 709:12, 17 710:7 711:4,9, 17,25 712:9,15,23 713:24 714:13,15 716:21 717:12 718:4,8,18,21 719:1,3,4,10,15, 16,23 720:11 721:9,16,18,22 722:11 723:12,15, 17,22,24 724:13, 14,18 725:2,16,23 726:9,23 727:17, 22 729:14 731:4 732:22 734:25 735:10,24 737:20 739:15 742:24 770:15 775:1,13 799:13 801:2,7 807:11 808:16,22 809:1 810:3 817:13 822:15 826:24 830:9 838:17 839:8 840:11 845:6 **Belt's** 597:2 659:21,23 660:3, 7,15,19 701:8 711:2 736:7 743:16 817:5,11

15 bench 686:23 690:14 742:11 821:23 829:16 830:16 838:7 843:11 845:14,19 beneficial 663:25 benefit 595:3,4,8 643:13,17 650:14 729:4,10,20 731:6 738:21 747:15 761:13 788:15 818:25 820:10,13, 24 821:6 benefiting 820:12 **benefits** 706:2,4,5 709:24 710:10 725:8 726:16,22, 24 727:4,9,13,16 728:6 729:14 730:3 732:11,12 735:7,24 789:3 790:7 793:8,12, 17,19,22 813:15 814:2 815:5 816:20 819:9,11 820:22,23 821:4, 5,13 834:25 835:7,11,16,21, 22,24 837:21,24 840:25 841:2,8,15 842:4 **best-case** 837:23, 24 838:15,18 839:5,19 bidirectional 813:22 814:4,24 big 728:21 758:2,3 763:19 781:2 Bill 620:21 625:21 797:1 823:24 824:3,4 **billion** 709:14

719:12 724:13.15. 17,19,25 819:8,23 **binder** 617:6,7 **binding** 758:22 **bit** 628:20 665:24 666:1 668:17 680:24 689:15 690:19 755:19 814:10,14 815:22, 25 819:2 black 812:14,21 **blanket** 629:4,5 **blanks** 678:20 **Bloomington** 702:7 **blue** 760:18 **bodied** 757:1 **body** 626:2 **boilers** 714:24 **Boone** 761:14 **border** 596:24 **bottom** 614:13 632:15 638:6 639:24 641:2 693:6 748:16,21 749:4 755:20 762:5 767:25 773:14 796:22 797:9 **bought** 762:18 764:25 765:4 767:8 781:21 boundaries 778:1 boundary 605:9 brackets 672:24 **Brad** 600:18,20 607:2 **BRADY** 704:14 800:23 822:12



818:5 828:12

829:4,5,7 845:13,

826:21 830:6 branches 696:1 **break** 637:2,11 643:7 678:10,13 736:24 737:5,15 795:10,11 breakdown 727:18 breaking 593:3 678:12 **breaks** 819:9 briefing 737:22 739:17 **briefly** 626:12 675:25 800:25 **bring** 732:2 **bringing** 732:13 837:9 **brings** 795:8 broad 610:11 broadband 677:14 broadest 768:12 brought 771:2 813:13 830:17 836:6 **brush** 680:25 **bucket** 766:25 769:24,25 **buckets** 767:14 769:15,24 770:1 **build** 597:4 600:24 609:7 649:2 697:10 744:23 757:18 763:10 776:5 **building** 708:14, 22 721:1 730:16

732:21 759:2

770:12 775:13

830:1 buildings 656:22 **built** 597:3 649:5 656:20 709:17.23 710:2,3,6,10,20, 22 718:3,7,9,10, 25 719:4,15 720:16 721:7 765:16 776:17,18 bulldozed 776:2 **bullet** 591:21 burdensome 700:4,16 **Bureau** 748:17 **Bureau's** 625:22 626:14 **buried** 611:13 613:12 614:6 **Burke** 602:25 **Burns** 833:18,21 bury 612:11,16 614:16 **burying** 611:18 612:20 613:18 **business** 600:21 624:19,22 645:9 702:5,6 721:11,20 businesses 656:22 789:6,13, 20 **buy** 638:17 722:19,22 752:11 766:24 767:5,13 768:24 769:8 770:5 777:20 781:3.17 **buying** 721:25 766:5 767:2,10,11

calling 847:23

C C-L-A-I-R-E 796:6 **cable** 630:17 677:5 678:25 679:6 **cables** 677:18 cafe 764:24 cafes 765:6 calculate 645:7 773:16 781:24 788:9 831:15 835:23 calculated 684:5,7 820:13 831:14 calculating 831:7 calculation 618:13,14 625:5 651:5 672:3,4,8,9 673:19 689:4 724:24 732:12 821:10 calculations 671:11 700:6 725:7 774:7 calculator 671:7 674:16 **Caldwell** 763:22 calibrate 782:7 call 620:23 628:9 640:23 657:5 747:25 758:10 846:5 Callaway 721:7 called 596:20 706:17 740:18 748:3

calls 598:19 628:3

640:20 691:25 camera 676:18 candid 669:14 cap 667:23 capabilities 841:10 842:5,8 capability 705:23 841:18.20 capable 705:24 708:13,15,17 726:7 capacity 597:10 709:13 713:13 719:11 721:25 722:5,10,12,19,22 723:4,17,24 724:1 796:8 815:15,21, 24 816:3,4,10,18, 21 819:6,19,21 825:5 832:24 838:17,19,22,24 839:6,7 840:7 841:8,9 843:5,9 844:4,8 **capital** 705:20 724:20,21 727:18 caps 706:18 card 604:8 cardiologist 847:21 cards 693:14 care 742:22 762:19 carefully 665:25 Carolina 776:21 case 592:11 596:7,10 597:14. 16 610:3,16 621:10 637:4 666:16 708:20 709:9 711:2 713:8



buys 769:19,20

715:4,8 717:25 718:11,16,19 719:14 731:4,5, 15,18 733:5,24 734:25 735:6,10, 14.22 736:6 737:17,19 738:7,9 739:3,22 742:16 764:5 769:16 771:7,24 772:9 785:1,7,8 787:1 796:13,15 808:24 810:24 811:3 825:9,12 833:3,6 836:6 844:18 cases 608:2 623:18 676:13 696:24 713:11 732:4 734:17 785:8 **cash** 831:7 **cashier** 781:23 catching 797:3 categories 778:18 category 773:5 778:13 783:11 caught 676:22 798:6 caused 652:18 726:9 **CCN** 592:10 596:7, 10 599:11,16 667:9 734:25 **CCNS** 635:16 643:1 cease 665:1 center 603:20 606:2 center-pivot 603:19,21 605:8

652:14 655:12,21

center-pivots 605:10 central 764:14 certainty 695:14 705:10 780:25 782:3 certificate 622:9, 13 731:19 808:17 certification 658:24 659:1,3 **cetera** 640:3 659:23 725:8 788:25 **chain** 717:7,21,22 720:4 752:13 760:22 773:8 783:16 **Chair** 822:19 **Chairman** 644:5,7 667:12,14,18 673:2,5,10 674:2 675:19 731:15 790:11,12,14,21 812:9,10,12 816:23 828:8 834:18,19,22 836:20 840:24 846:23 Chairman's 791:4 837:18 **chairs** 701:11 challenge 835:20 challenges 612:19 613:18 694:24 695:1,3 696:15 challenging 695:9,11 835:12 **chance** 622:20 673:3 738:17 820:18 **Chandler** 591:4,9,

678:17 687:10 690:12 692:25 701:2 818:16 **change** 654:21 664:15,16 683:1 23 690:7 691:24 703:10 796:20 797:20 813:9 822:21,24 823:3 833:17 **changed** 688:10, 23 689:1,24 817:20 818:1.10 829:6 changing 717:3 characterize 737:10 **chart** 748:5,13 749:12 753:21 755:20 **charts** 747:12 748:4 **check** 791:22 801:11 809:24 845:24 846:15 **checks** 782:12 chemical 770:6 **cherry** 731:21 **choice** 695:16 739:8 **choose** 616:7 665:24 696:6 **chose** 657:18 664:4 669:16 789:22 821:16 **chosen** 605:25 655:11 circles 655:3

13 599:22 637:21 776:23 643:11 644:4 **circuit** 612:10 621:16 626:3 **circuits** 612:11 circulated 672:20 circumstance 688:19 689:13,16, 623:5,6 635:14 circumstances 754:22 citation 810:1 cite 737:22 738:14 739:16 786:1,12 **cited** 737:20 791:12 792:1,2 810:16 cites 810:4 819:4, 17 City 847:20 **claims** 634:18 660:1 **Claire** 795:24 796:6 839:24 clarification 645:22 660:16 673:2 675:20 809:8 816:1 830:25 **clarify** 606:14 640:14,15 646:5 667:16,19 669:4, 19 729:25 790:15 811:1 824:3 clarifying 677:8 811:9 **clarity** 644:20 745:3 **clawed** 649:7,11 **clean** 704:13 714:23 800:22 822:11 826:20



630:22 631:16,19

830:5
clear 602:12 608:8 618:10 623:22 653:17 673:24 685:22 688:19 689:10 730:18 732:11,25 739:20 745:2 747:8 753:3 756:7 772:20,21 775:12 780:18 781:10 783:1 799:18 800:1 809:11 810:15 817:22 847:11
clearing 657:17,20 680:25 681:20
client 618:18
climbing 760:8
clock 665:8,12
close 604:21 700:11 778:10 782:25 783:20,21, 23 784:21
closer 656:21 681:4,13 689:15 750:21 766:11
CLS 624:13
Club 686:25 704:9 800:18 822:7 826:16 830:1 834:24
CNN 737:18
co-locate 655:24
co-op 639:10 711:6,7 712:1 766:6
co-op's 711:12 712:6
co-ops 711:20
coal 714:5,6,7,8,9

717:20,25

Transcript of
code 667:2 697:14,23
coerce 633:5
coercion 666:1
coercively 626:10
Colby 702:7
Cole 760:21
collar 760:18,19 761:9
collection 755:12
collective 610:14
Columbia 761:14
column 723:10
combined 592:1
commencement 615:6,25 616:12 662:16
comment 604:7,8, 23 693:14
comments 602:2, 13,15 603:14 604:8,16 656:1 693:10,13 694:1
Commerce 598:7 599:1
commercial 632:7 776:20 838:16 839:6 840:16 841:25 842:1
commercially 653:15
Commission 596:7,15 598:7 599:10,16 620:11 621:3,17 622:4,9, 11 625:14 626:18, 20 635:15 637:3

687:21 703:22 722:14,17 724:6 731:2 734:17 735:9,17,22 737:8,20 739:11 771:2,7 790:22 796:10 799:14 812:9,24 813:2 836:22 845:8,18 846:3 Commission's 597:15 599:1 620:9 622:14 637:5,12 722:25 737:23 799:17 Commissioner 644:6,8,10,15 646:2,7 662:24 675:21,22,24 676:21 678:3,6 687:11 690:20 790:25 791:1,2 **Commissioners** 637:13 686:20 commissions 809:11 commitment 623:23 624:1 communicate 658:2 666:12 communicated 613:11 675:7 communicating 679:17 communication

677:12,17 communications 630:18 667:5 677:17 communities 682:7 817:1,25 818:13, community 14 821:21 823:22 600:15 764:17 825:6 828:7 833:1 765:17 companies 635:16 641:8,14 643:2 666:24 **company** 607:23 608:1,10,11 609:8,9 611:16 613:15 619:24 620:19 621:19,22 622:6 623:6.7 624:9,13,19 667:11,15 668:25 625:8,19 627:3 628:1,19 629:10. 23 631:3 632:5 633:2,21 635:17, 20,23 638:19 834:17 847:17,18 642:8,19 647:18 648:24,25 652:17, 19,22 653:1,19 654:5,18 656:14 790:11,23 845:25 660:6 661:19,25 663:14,22 665:13 666:3,20 672:18 677:12 679:6 680:3,4,21 681:6 687:13,19 688:3, committed 665:17 5,11 689:21 690:7 694:20 695:2,4,18 697:7,25 698:20 700:4,18 704:1 720:17 752:11,18 758:1 767:4 769:8,19 770:20 771:14,15 772:12 773:10 774:5 777:19 778:5,6 601:11 613:17



641:18 642:24

643:1 644:3 667:7

671:13 672:15,17

781:8 783:14 814:3 Company's 630:23 661:17,23 812:15 comparable 755:14 **compare** 755:12 831:8 compared 650:2 685:19 comparing 603:4 comparison 830:20 compensate 652:2,12 660:5 697:6 compensated 650:2 728:17 compensating 774:14 compensation 593:11 614:21 618:14 622:11 625:4 643:14 649:14,15,20 650:1 652:4 653:17 659:19 660:14 666:21 668:12 672:4,9 675:17 679:2,5,7, 20,25 684:5,8 686:15 689:3 694:25 696:11 728:7 730:5,6 794:17 799:15 818:6,19 competent 642:9 complaint 603:13 764:20,23 complete 701:9 741:21 743:5.6

791:14 844:19 completed 599:9 813:17 831:24 completely 638:23 738:18 741:18 759:12 770:22 771:23 778:5 completeness 742:1 743:11 completes 675:19 completing 810:18 811:13 827:18 **complex** 699:12 complicated 628:14 769:16 835:11 **comply** 662:8 686:6 component 593:3 compound 628:15 computer 706:18 735:7 conceded 613:22 concept 664:6 732:20 concepts 750:20 conceptually 673:12 **concern** 652:16 654:17 661:23 813:11 829:13 concerned 654:18,25 661:18 747:8,21 794:8 **concerns** 654:16, 22 655:2 657:4 658:22 682:14 693:17 743:10 746:11 812:14,17

813:1.21 818:9.11 828:19,20 837:3, 5,15,16 839:13 concerted 605:14. 19 607:8 **concise** 772:21 concluded 612:23,25 613:8 666:6 676:15,23 777:23 848:5 concludes 678:3 701:3 795:5 conclusion 598:20 611:19 613:13 628:4,9,21 640:21,24 692:1 746:13 772:14 777:6 787:10 802:1 conclusions 753:5 754:11 783:2 concrete 760:16 777:20 781:9 condemnation 608:2 610:3,12,15 623:20 625:11 627:5,12 633:3. 20,22 658:15,18 661:1 665:1,3 675:12,17 676:13 condemned 661:8 condemning 608:22 condition 714:25 799:12 812:19,25 817:12 822:20 823:10,12,23 conditions 596:6. 10 626:6 651:23, 25 715:7 750:14 785:10,22 799:22

817:5,9,14,18 829:6 **conduct** 621:19 667:3 697:14,22, 23 831:5 conducted 688:8 **CONE** 820:13 confidence 684:25 confidential 798:24 801:16,18, 20,25 802:4 confidentialcompetitive 798:25 configured 778:1 **confirm** 644:22 745:24 confused 633:14 670:9 684:4 690:19 confusing 640:10 695:4 699:4 700:2 775:11 confusion 645:23 668:18 696:15,19 connected 783:6 connection 763:4 818:17 connector 592:8, 17,24 593:2,5,7, 14,21 594:5 600:2 602:5,7,10,16 603:2,18,22 607:14,15 611:12, 20 612:10 614:23 627:11 649:15,19 655:2,3 672:10 675:5,18 685:25 686:4,18 687:14, 24 688:1,13,15,



20,24 696:10,24 817:15,19,24 818:18 833:16,20

consecutive 736:17

consequence 713:25

consequences 715:12 725:18,25 730:14 732:21

Conservation 657:7

consideration 609:13 674:4,8, 13,24 716:1 809:12 810:17 824:1

considerations 612:13,18,21 614:3 684:2 827:12

considered 611:15 684:19 716:6 749:25 811:21 823:24

consistent 794:2

consists 596:22

constant 764:23

constrain 631:18 745:21

construct 627:20 632:18 720:10 721:12 758:11

constructed

648:20 653:9 658:25 663:11 706:3 775:1 778:10

constructing

679:15 809:2 810:3

construction

596:11,16 615:6, 7,25 616:12 636:12 651:10,11 652:3,17 659:16 662:17 663:4,9 668:1,13 677:6,20 679:18,19,21 680:7,12 681:5,13 683:2 685:2 689:10 700:11 706:25 707:1,8,16 708:1,7,8,24 710:16,20,23 716:20 720:13 725:1,4,9,12 727:9,14 730:21 755:22 756:16 757:13 758:1,25

760:1,4,8 761:20, 22,24 762:2,6 763:4,8 764:1 765:21,22 774:10 775:6,9 777:19

781:20 783:3,7 784:11,17 790:19 792:3 807:22 809:3

consult 618:17 714:11.14

consultant 759:5

consultants 600:16

consulting 702:12

contact 611:2 697:20

contacting 624:20

contained 628:17 630:5 721:3

contemplate 793:12

contemplated 685:19

contemplation 663:14

content 742:21

contents 628:8 638:9 741:24 748:7

context 611:10 705:12 731:23 743:7 774:16,17 779:19 780:21 783:3

continually 732:2

continue 619:21 664:22 665:13 673:4

continued 635:11 637:22 652:16

contract 624:15, 17 671:10 758:23 759:9 833:15,19

contracted 838:19,22

contracting 841:4, 13,14

contractor 707:20

contractors 636:21 717:1 757:24

contracts 839:6 840:8,9,10 841:25 842:25

contractual 616:24 662:8

contrary 622:19 718:19 785:11,25 786:18

contribute 796:12 825:8 833:2

control 778:6 842:9

controversy 750:3

convenience 622:13 765:5

convenient 622:15 678:12

Converge 793:15

conversation 608:9.10.24 668:18,20,25

697:8 772:19

conversations 594:21 609:21 613:19 658:7 693:15 697:11

converse 776:11

converter 596:24 636:19 841:10,12

convey 627:17 836:10

cooperation 681:20,23

coordinate 601:10 681:17

coordination 601:5,7 681:20

copies 671:18 672:20 733:22.24 740:23 741:25 742:5,11

copy 625:5 673:7 680:19 691:6 692:25 693:4 734:9 735:25 736:8 742:8,9 745:6 819:12,25

cordoned 731:18

corner 693:6

corporate 641:25 642:4,19,21

corporation



638:24
correct 591:24
592:15,20,21
596:7,13,25
597:5,9 598:3,8,
12,13 599:14
606:9 614:7,17,18
615:6,11 616:1
619:21 620:2
623:24 624:11,12
630:18 631:20
632:2 635:23
636:2,3,6 638:15,
19,20,21,22 639:5
640:19 641:24
642:1,20 643:10,
16 646:6 647:22
648:17 649:18
653:5 659:8
660:23,24 662:16
670:18 671:2,11,
12 674:5,7 687:25
691:16 696:2,12,
13 699:13,15,19,
20,22 706:18,19,
23 707:6,10,11,
13,25 708:4,7,9
709:4,18,24
710:5,18,25
716:15,21 717:6,
11,17 721:25
722:12 723:12,17
724:4,13 725:3
726:25 727:14,23
728:13 733:25
734:2,18 735:2
740:25 746:1,5,9,
10 747:3 748:6,11
749:14 751:1
753:15 754:2,3,7,
8 756:5,11,12,21
757:8,16 761:10
766:7 767:9,21
769:21 773:17,18
778:20 780:3,13
782:2 783:17,18
784:17,22 788:11,
, ,

12 789:1,4,11,12, 18 790:7,8,20 792:21 793:5,10, 25 794:22,24 798:13 799:20 800:6 801:16 808:6 825:20 834:3 837:12 846:11

correction 643:19 833:12

corrections

702:21 703:5,13, 14 796:18 798:9 799:7 825:14 833:10,22 846:12, 15

correctly 667:20 737:11 799:13 807:24 808:12 815:18 836:9

cost 690:8,11 705:4 721:11,12 722:6 723:16,23 760:9 766:2 814:9 820:12 836:3

costs 713:10,11, 16 715:2 721:15, 20,23,24 722:4, 11,20 723:3 724:3 725:4,10 809:3

counsel 595:19,25 617:24 626:14 643:12 660:25 668:19 687:4 701:22 704:15 740:3 800:14 822:5 826:14 829:23

counsel's 670:15 count 762:22 counted 751:17,

18

counterparty 685:7

counties 603:17 675:5,18 757:15, 18 761:4 763:20 764:15 768:3 773:15 783:4,12 784:8

country 699:18 746:9

county 597:1 636:19 740:12,18 741:16 744:20,22 755:23 756:1,5 757:11,22,23 758:4,16,25 759:10 760:21 761:9,13,14,16, 21,24 762:3 763:9,12,15,18, 22,25 764:14 765:7 768:8 769:3,18 777:9, 24,25 778:1 779:24 781:4 783:13 784:12,17 788:17 792:4,6

County's 778:1

couple 624:7 634:3 667:15 678:7 718:2 737:9 748:9 787:23 788:8 827:11 828:9 838:8 845:13

coupled 700:13

court 618:6,25 620:15 621:11,12, 16 623:7 625:9 626:1 627:5 629:25 630:1 677:1 701:18 702:7 739:20,21 745:6 801:5,21 824:18 832:9

Court's 629:2

court-condemned 633:5

courts 622:6 625:14,17 626:3

cover 635:10 656:25 663:10,13 705:4 722:3,6 736:13

covered 719:7

COVID 746:17

crack 758:9

create 696:20 700:19 707:3 756:4

created 709:24 710:11 746:11 793:22 794:13

crew 680:13 757:17 763:10

crews 758:23 763:11 770:15

criteria 831:20

critical 770:23 771:16

criticisms 751:4

critique 765:9

crop 618:14 652:12,13,19,22 654:8 659:19 660:13 666:21 668:11,14 672:4,8 679:16,19,23,25 683:3 689:3 774:14

cropland 657:1 675:6,8

crops 657:10 659:23 683:4



776:2 722:12.21 724:4 770:15 809:2 768:10 831:1 809:3 cross 591:5 607:8 **debris** 662:6 **defined** 627:19,20 cut 713:24 716:12 747:20 770:24 **debt** 705:17 **defines** 627:19 800:17,23 801:3, CV 788:23 **decide** 649:2 definition 704:23 7,9 845:16 694:22 737:16 705:11 774:1 cross-exam D 813:9 817:6,8 **decided** 602:18 843:18 822:21 829:8,9, 664:14 737:16 **D-A-V-I-D** 701:20 cross-examination 11,13 830:18,19 823:22 591:16 599:20,23 831:3 damage 652:13, decides 597:4 637:17,22 639:25 18,19,23 653:16, definitive 772:11 610:2 635:17 640:7 643:11 20 654:5 659:22 663:1 818:14 definitively 713:19 686:22 687:8 666:21 668:13 779:1 690:14,17 704:5, deciding 836:4 679:21 774:14 7,21 706:14 733:8 **degree** 684:14 decision 603:9 damages 652:2,5, 738:12 745:14 835:20 25 654:8,10,12 605:2 607:13,17, 770:21 788:6 deleting 797:18 19 608:23,25 660:20 668:5.14 791:3 799:25 609:1,25 610:1,5, 679:20,24 800:8 807:8,11,15 delineating 6,11,15 614:4 821:22 822:17 817:13 data 691:7,21,23 621:18 632:4 826:6,7 827:2 692:3 745:25 deliver 597:7 664:1,11,13 665:3 829:16 834:14,16 746:4,6,15,18,20, 700:12 722:13,17, delivered 839:8 838:6,12 843:12 22,23 747:17 19,25 724:6 844:25 845:4,22 752:22 753:5,7,9, delivery 631:17 799:17 20 754:5,14 840:11 cross-examine decisions 609:17 755:5,7,9,11,12 743:20 843:8 demand 718:17 778:9 779:4 845:19 decommissioning 752:12 782:8,18 784:3 662:2,18 663:7 **crossed** 679:10 demand-side 785:3 812:23 667:9 817:25 715:17,22,24 crosses 605:5,8 decrease 714:8 716:1,4,13 date 647:11 **crossings** 655:13, 718:15,22,24 demolishing 21 **dated** 744:18 deducted 728:8, 662:3 **CRP** 657:7 13,24 **David** 701:19.24 demonstrates 702:6,15 crystal 765:1 deductions 597:18 728:19,20 729:2, day 667:1 742:7 cultivated 657:12 denial 737:18 3,6,16 794:17 757:6 782:24 cultural 603:3 800:17 846:24 denominator **deep** 660:17 cumbersome 848:6 750:10 defending 741:23 732:5 dead 611:8 denying 733:6 defer 644:7 808:19 **curious** 780:12 deal 772:17 **Department** 823:5 828:20 **current** 732:16 796:11 825:7 dealing 660:1 deferral 715:17,22 799:8,10 810:24 departments deals 705:1 840:8,9 **define** 704:24 700:17 705:5,10,13 dealt 620:21 customers



depend 714:2,5 717:21 720:17,22 841:8 dependent 707:19 depending 708:16 758:19 801:17,19 depends 684:1 deprived 743:20 depth 664:6 673:6 derivative 781:15 describe 614:21 634:23 655:22 663:8 706:2 describing 663:7 design 650:11 810:18 811:14 827:19 designated 812:21 **designed** 652:1,4, 8 690:3 776:16 813:3 designs 842:22,23 **desire** 656:2 **desires** 655:23 **detail** 656:8 detailed 810:18 811:14 812:22 827:19 detailing 681:1 details 659:9 681:17 determination 604:22 626:3,4 determine 622:4 654:9,10 662:20 667:8 715:16,21

726:15,17 841:3

determined 689:15 831:9 determines 663:6 determining 635:19 detriments 726:19,20,25 727:4 detur 658:4 devastate 657:10 develop 632:18,25 development 600:15,22,25 601:2 640:5 776:22,23,24 777:3 die 785:17 difference 604:24 621:14 641:25 642:18 672:23 685:20,23 686:3, 14 690:3,4,11 694:13 705:18 726:23 753:4 758:2,3,7,8,17 830:21 841:18 differences 639:15 695:8 differential 836:5 differently 661:7 705:15 difficult 605:23 610:5 645:6 678:21 695:4 837:19 839:1 841:3 difficulty 841:23 diffuse 779:2 dig 617:1 **Dippell** 591:2

598:21 599:19 612:6 613:6 617:21 618:5,12, 20 620:17 621:8 622:1,22 623:14 626:11,13,22 628:12,20 629:6, 17 633:11,16,24 636:25 637:9,19 640:13,23 641:12 642:12 643:6,19, 23,25 644:3,9 662:21 667:12 671:9,13,18,20 672:1,13,20 673:1,7,22 674:1 675:21 676:17 678:5,16,19,23 686:19,25 687:2, 4,6 690:13 692:11,14,16,18, 21 698:16,21 699:1 700:24 701:2,5,7,12,17, 21 703:23 704:6, 9,11,13,15,17 706:9 712:25 716:5 719:17 729:18 731:6,11, 24 732:17,24 733:11,15,20,23 734:2,7,10 735:25 736:10,23 737:2,4 738:3,22 739:10, 19 740:5,22 741:1,11 742:10, 16,23 743:12,22 744:6,12 745:1,10 766:10,13 772:15 773:2 775:2 783:19,25 786:9, 22 787:19,22,25 790:10,22 791:2 795:4,8,14,21 797:5,14,23 798:3,5,19,23 799:24 800:1,7,

10,12,14,16,20, 22,24 801:6,11,23 807:7,10 812:8 816:25 817:3 820:1,3 821:20,25 822:3,5,7,9,11,13, 15 823:8,13 824:8,11,17,21 825:25 826:7,10, 12,14,16,18,20, 22,24 828:6,9,11 829:14,19,21,23, 25 830:3,5,7,9,12 831:23 832:3,8,12 834:8,15 836:22 837:1,7,10 838:5, 9 842:14 843:16, 22 844:14,18,23 845:3,7,11,21 846:12,16,20 847:3,7,13 848:3 direct 591:19 596:5 597:12 599:5,25 600:4,6 601:14 614:20 652:11 657:13 660:10 685:8 702:2,16,23 706:21 709:11 711:1 716:17,20, 23 717:13 719:9, 24 745:20 755:22 756:2 759:25 760:12 762:16,25 773:12,13,20,22 774:2 775:8,11,16 778:15,20,21 780:10,24 781:6

directed 658:21 direction 640:1 644:17 664:14

784:11 786:15

796:2 819:3 820:4

790:19 792:4

825:3 832:22



directional 814:2, 23 directions 819:2 directive 608:11 directly 597:23 604:8 621:15 658:2 676:6,10 717:4 728:17 750:12 763:3 dirt 774:11 **disagree** 622:3,18 712:22 disagreed 691:2 disapproves 634:16 disbursed 649:3 discern 835:12 837:20 discernible 835:25 disclosures 636:4 **discount** 814:21 815:16 discounted 815:9 816:4 **discuss** 596:5 661:2 694:24 766:1 818:5 discussed 677:13 680:4 696:16 708:5 799:8 813:7 discusses 640:1 813:9 discussing 668:2 discussion 608:19,20 609:11 737:5 809:6,12, 15,16 discussions 632:7

698:4 751:3 dismantling 662:3 dispatch 842:10 dispense 846:7 **displace** 711:4,25 712:10,23 displaced 711:6, 11 712:6 714:12. 15 displaces 712:18, displacing 713:8, 17 dispose 846:4 disposing 662:6 dispute 815:7 disrupt 655:1 disruptive 612:20 613:22 distance 606:5 766:22 distinction 635:5 641:21 distinguish 716:19 distributed 649:11 672:21 distribution 673:21 756:18 789:2 district 620:14 622:6 625:13,17 disturbed 657:9 681:2 **DL-1** 702:17 **DL-2** 702:17 723:8 724:9 745:19 748:1 753:12 755:19 792:1

docket 809:18 dockets 682:21 **doctor** 744:15 764:18 771:2 786:2 document 616:24 624:7 630:8 740:9,10,14,16 741:5,8,14,15,22 742:17,25 743:1, 3,17,20,21 744:7, 10,13,16 745:22 840:4 documents 693:3 744:4 **Doe** 672:24 674:23 **dollars** 723:12 752:7,9 776:7,8, 10,12 domain 620:11,12, 13,15 621:15 622:5,12,17 626:16,20,21 627:7,8 634:17 661:5 675:14 domestic 755:13 **double** 612:10 846:15 doubting 780:18 downturn 752:1 dozed 774:22 dozers 774:11 **DP** 753:25 drainage 652:13 **drive** 653:15 driven 819:6,19,20 driver's 758:16 **drop** 753:23 754:1,22

due 647:5 650:19 669:9 673:16 733:4,10 738:4, 10,16,20 743:10 746:13 788:10 dug 612:12 duly 701:25 795:25 825:1 832:20 duplicative 738:18 794:10 Ε e-m-e-r-i-t-u-s 702:25 E-U-B-A-N-K-S 796:6 **EA** 733:24,25 **EA-2014** 731:15 EA-2014-0207 731:4 735:14,16 736:14 737:10 739:23 EA-2016-0358 592:11 735:1,17 EA-2023-0017 591:4 **eagerly** 846:24 **earlier** 595:23 645:11 653:3 669:19 679:8 683:22 687:12 691:2 718:2 719:7 774:13 799:8 843:18 **early** 594:21 **earned** 780:24 earnings 707:8 728:5,10,16 729:2 755:15 778:18



784:7 794:9	easier 780:10	economy 730:19	elimination
ease 749:3	easily 759:11	747:19 752:25	715:17,22 717:13
		758:4,18 766:18	719:24 818:16
easement 592:12,	eastern 596:25	781:16	ELLINGER 644:1
19 593:12,24,25 594:2 615:13	easy 595:7 615:4	effect 615:13	692:19 743:15
616:15,23,25	672:22	669:8 682:1,3,5,9	787:23 788:2,7
617:4,15 618:13,	eat 781:17	698:11 729:17	790:9
24 620:5 621:4,12		755:6 762:4	else's 734:22
624:11,25 625:5,	echo 738:13	765:15 775:10,12	
7,9,25 626:9	economic 702:11	effects 716:20,23	emergency
627:2,4,19,20	704:24,25 705:1,5	717:2,13,16	679:12
630:3,5,11,15	706:16 708:13,22	719:24 720:1	emeritus 702:13,
631:4,8,14,23,25	726:16,18,20	746:12 756:15	25 703:3,7
632:1,14,17	727:8 730:22	760:1 765:10,13	eminent 620:11,
633:2,4,5,21	732:11,12,14	773:20,22 774:2	12,13,15 621:15
647:2,6,8,12	734:16 740:10	777:13 780:13,15,	622:5,12,17
648:15 649:9,10	741:15 744:18	21 781:11 782:15	626:16,20,21
651:4,21 652:4	746:8,13 747:15	784:11 789:18	627:7,8 634:17
653:16,22 660:8,	748:17 752:20	790:1	661:5 675:14
23 661:4 663:22	754:9,20 755:7	effort 605:14,19	
669:10 670:8	764:13 766:3	607:8 755:12	employed 702:9 703:2 727:13
671:10 672:3,7	767:6 768:12,16,		
673:19 674:4,8,	25 769:17 771:3,5 774:9 775:25	efforts 601:4	796:8,9 825:5 832:24,25
13,24 677:4,10,14	774.9 775.25	EFIS 734:6	,
678:24 679:3	777:2 780:16	either/or 694:20	employee 729:10,
680:2 685:1,12,	782:1 785:10,22	695:20	20
17,19,23 686:3,	787:9 788:15,20,		employees
10,15 688:9	25 789:17,25	electric 622:16	636:10,14,18,21
689:16 697:10	790:7,16 792:18,	789:2	697:19,24 713:14
698:11 796:23	24 793:2,3,8,22	electrical 630:23	717:1 749:16
797:2 818:21	794:9,12 828:17	631:15,17,19	762:4 783:16
easements 591:22	830:17,18,19	electricity 699:17	802:3
592:7 594:25	831:3,5,9 841:24	713:8 718:17,23,	employees'
598:18 599:6,10,	economically	24	728:14
15 608:1 619:23,	705:19 718:10	element 778:15	_
24 620:2 621:23	721:10,19,22	element 776.15	employer 728:15
647:9,17 648:21, 22 655:24 656:11	768:4	elements 699:10	employment
662:4,5 675:25	economics 702:13	elicited 698:24	748:5,10,12,15
676:2,4,7,8,11,25	703:1 750:4	eliminate 649:21	749:13,14,15,16
677:15,16 680:20			750:1,6,11,22
681:7 684:5,10,15	economist 750:1	eliminated 717:16	751:7,9,16
687:13 690:20	768:11	720:2	755:20,22 764:2
691:1,4,12,16,19	economists	eliminating	765:19,20 773:7, 13,21 774:16,17
807:22	699:22 750:9	592:23 649:17	777:23 778:23
		693:23	782:19 783:3
			102.13 100.0



encompass 684:24 end 593:25 627:14 637:16 650:19 658:15 666:25 674:11 676:24 769:15 779:20 782:24 783:21 807:7 813:19 814:13 835:13 **end-use** 722:9 724:1 endeavor 653:2 656:24 **energy** 631:15,18, 19 726:3,6 777:2 789:5 836:3 838:17,23 839:7 840:11 enforcement 681:24 engagement 601:4 engineer 612:7 833:1 engineering 612:13,24 614:2 658:10 683:14 684:1 690:10 693:21 796:10 810:18 811:14 827:19 841:9 842:5,8,22,23 engineers 699:21 **ensure** 638:19

enter 627:12 665:3

671:17 672:17

846:11.18 847:4

703:22 834:7

entered 684:10

686:11 779:23

enterprise 634:18, 24,25 635:12 639:2 641:3,15 entertain 700:18 739:4 **entire** 596:13 645:1 691:4 706:3 732:3 739:5,12 807:22 813:16 835:9 **entirety** 731:16 739:14 745:25 799:22 entities 638:2 721:25 entitled 740:10 741:15 **entity** 634:25 663:18 831:11 entry 820:13 **enure** 761:13 environment 603:3 841:16 environmental 812:2 828:1 **envision** 818:18 **equal** 592:13 equally 622:7 **equates** 776:8 equipment 630:17 662:3 773:9 **equity** 705:17 equity--through 635:18 equivalent 707:1 equivalents 756:12 error 782:9 792:18,20

escalated 615:20 651:12 669:23 670:13 674:16 escalator 661:11 essentially 601:3 670:7 710:5 812:20 establish 662:17 697:15 established 650:15 681:8 690:24 727:11 742:7 establishment 662:1 **estates** 679:11 **estimate** 618:13. 14 672:4 683:6 689:3,10 779:14 787:9 819:10 821:13 estimated 594:11 652:9 689:12 706:24 708:8 709:12 719:9 778:19 estimates 706:16 730:22 819:5 820:7 estimating 708:15 727:10 estimation 787:11 **Eubanks** 795:15. 24 796:4,6,7 798:7,16 799:7, 18.23 800:2 807:13 812:9 823:18 824:7,8 839:25 **Eubanks'** 801:17

Eubanks's 827:4

evaluate 789:15 831:15 evaluated 657:19 evening 737:6 807:13,14 824:22 826:25 827:1 832:16,18 834:19, 20 event 635:16 649:5 661:19 663:19 679:12 **events** 722:9 **Evergy** 635:6,25 638:1 639:15 evidence 639:20 672:16,17,19 704:2 712:21 716:3 718:21 719:14 732:10 733:7,20 738:8, 11,12,15 739:18 741:2,6,9 742:15 743:5 747:11 770:13,16 772:16 779:24 799:4 826:4 834:12 847:6 evidentiary 738:20 exact 625:9 792:2, 6,10 **EXAMINATION** 692:23 702:2 791:7 796:2 823:16 825:3 830:14 832:22 842:17 examined 591:14 701:25 795:25 825:1 832:20 examining 628:7



examples 674:22

	Transcript or	Trocccurings outle or,	2023index. exceediaiidie
770:23 793:1	22 736:13 738:24	21 760:6 780:8	697:4 729:8,19
exceed 721:23	742:2 745:4 749:13 796:13,16	expense 715:9,10 831:12	737:21 788:16 793:21 815:5
exceedingly	797:5 798:24		extra 843:17
763:25	800:6 825:9,12,24	expensive 770:6	CALIC 040.17
Excel 700:19	826:1 833:4,8 846:19,20	experiences 660:1	F
Excellent 836:20	,	expert 642:21	
excerpt 735:13	exhibits 616:23 617:18 618:11,23,	685:5 744:2	face 771:16
741:24,25	24 671:24 672:18	expertise 622:16	facetious 700:21
excerpted 736:15	674:22 686:11	627:9 667:10 721:2 828:15	facilitate 601:10
exchange 669:19	702:18 703:22,24, 25 704:1 742:14		631:17,25
810:9	798:17 799:3	experts 699:25	facilities 627:18
excited 764:7	826:3 834:7,9,10,	expire 647:8	662:4,7,10 663:10 679:16 682:1
exclude 668:5	11 847:5	expires 647:6	817:7 829:8
exclusion 668:17	exist 776:14	explain 640:8	facility 712:20
exclusive 627:18	780:19 783:15	649:24 671:24 744:15 772:22	fact 598:22 626:19
excuse 610:22	786:8 788:17	820:9	642:23,25 643:14
666:11 670:8	existence 719:5	explained 664:6	712:21 729:12
676:17 677:16	existing 591:23	814:15	747:10 753:2
815:25	592:4 631:16 655:23,24 656:2,	explanation 640:6	754:14,15 767:8
excused 701:5,6	10,12,13,17,21	744:12 772:23	769:9 815:4 839:2
795:6,7 800:17	685:15 789:13,20	explicitly 719:3	factor 604:22 621:2,18 625:18
824:9,10 831:25 832:2 844:20,22	790:4,5 794:10,14	express 614:14,22	680:12 755:5
,	817:14,18	634:17 656:1	784:4 838:24
executable 685:16	expand 789:14	684:19 685:11	839:7 843:5,9
execute 662:13,15	expanded 790:5	721:23 724:15	844:4,9
executed 838:16	expect 592:25	775:13 799:13 808:17,22 840:11	factors 626:17
839:6 840:16	594:1,3 629:9	,	720:22 768:3 770:24 839:15,18
executing 842:25	664:4 722:11,20 723:3,5 724:3	Express' 634:16	facts 639:19 716:2
Executive 741:18,	,	Express's 737:20	754:6,9 772:16
19	expectation 722:24 724:5	expressed 655:22	fail 716:8
exhibit 616:15	expected 637:11	682:14	
617:13,14,15,17, 18,23 618:12,25	705:4 727:19,25	extend 622:17 670:7	failed 784:20,21 785:21 786:6,20
619:11 623:9,10	expenditure		787:2,7 792:7
624:4 632:9	724:20 776:8	extended 637:11	failing 715:23
671:24 672:2,3,6, 7,8,12,23,24	788:18	extends 669:10	failure 785:8
673:18 674:23	expenditures	extension 647:4	792:17,21
689:11,20 733:17,	714:16 724:22	extent 641:17	failures 785:9
	725:6 727:19,20,	679:24 681:23	
1	İ	l	1



fair 592:13,18 594:19,23,24 600:24 610:8 612:3 614:13 615:1 617:19,20 624:2 628:15 629:21 649:16 659:25 666:20 672:11 684:7 694:14 695:25 696:12 697:5 725:16,23 731:21 759:4,16 760:17 771:1,6 772:10,13 786:21 792:13,17 793:2 836:1 841:5,6
fall 623:10 775:17
falls 601:8
false 752:2 761:21
familiar 597:20,22 606:11,13,19,21, 22 624:22 628:10 629:7 636:7 639:7 658:15,18,25 690:10 722:1 756:2
family 607:10
Fantastic 591:12
fare 595:18,20
farm 625:22 626:14 659:10,17 740:11,18 741:16 744:19,24 755:25 766:6 767:12 774:12 777:11,18 779:23
farmed 774:21 775:5
farmer 767:1,8,10, 15 769:18,25

770:4

683:19,20,25
felt 665:23 714:8 717:22
fertilization 681:2
fewer 747:11 770:5
fewest 605:6,7,8, 15,18,25
fiber 630:16 677:5, 11,13,24,25 678:2
field 652:13 653:15 785:24
figure 592:1,5 594:23,25 603:25 724:17 748:6,8,16 749:12 752:1 753:12,25 768:1 771:13 780:11
figured 783:24
figures 708:5 724:23 727:16 729:12,16 730:1 819:10
file 610:2,12,15, 18,20 799:13
filed 608:3,4 617:11 676:13,23 683:18,24 702:15 744:21 800:5 818:13
files 623:18
fill 678:20
filled 707:16 708:2
final 602:3,18,22 604:14 689:14,16, 18 730:9
finalized 689:9
finally 798:1
finance 685:5 808:18

financed 807:23 financial 597:19 685:7 705:13,16, 22,23 760:11 825:7 828:16 829:12 830:22,23 831:1,2,4,10,13, 14,18,19 financially 705:21, 24,25 financing 596:12, 17 665:12 684:19 705:17 808:19 809:2 817:5,8 823:23 829:6,10 **find** 610:22 611:1, 4 634:10 680:21 691:9 745:23 747:15 749:8 762:8 763:2 779:8,12,13 783:5,8,12,15 784:9,15,19 791:11,13 792:6, 16 819:9 839:1 844:24 **finding** 597:15 626:18,19 656:15 660:9 735:22 Findings 815:4 fine 701:12 740:22 769:4 786:6,19 800:12 finish 632:22 847:9 fired 774:25 firm 702:12 761:24 fixed 713:11 flaw 782:1 flaws 782:1,6 flow 813:22 814:2,



4,23,24 831:7 flows 774:17 fly 629:1 focus 828:17 830:20 831:14 **focused** 601:19 831:4,10 folks 781:6 follow 656:12 667:15 683:9 687:11 715:1 foot 835:4 **footnote** 703:10 810:1.7 footprint 690:4 789:14 for-profit 634:25 for-profit--evergy 635:2 force 750:7,12 751:13,18,22 761:25 forced 634:19 **forecast** 665:19 forecasted 619:19 forfeited 661:21 forgetting 821:11 **form** 616:15,23,25 617:4,10,17 619:5,8 645:12 651:4 653:22 672:5,9 816:15 forma 828:12 formal 772:25 **forms** 685:13 **forward** 598:15 602:4 609:12

754:16,24 762:6

779:6 780:2 forward-looking 705:2 779:19 fossil 713:15 **found** 617:8 746:2 768:25 793:12 797:16 foundation 621:21,25 716:3 771:18,19 772:7 774:24 775:22 fractional 783:12 frame 664:23,25 framework 774:4 frankly 738:16 763:14 free 739:16 744:6 frequency 652:25 frequently 652:21 front 601:14 615:2,24 616:9,16 619:5 647:3,20 648:11 649:3 652:8 668:22 669:1,22 670:16 673:15 676:6,10 684:14 746:23 788:3 813:19 814:13 820:8 fruition 813:5 **FTE** 762:9 763:3 783:6,13 **FTES** 756:13 763:3 fuel 713:15,16 714:4,5 fulfilled 839:15,17 full 647:9 669:6, 13,15,22 723:13 743:19 749:25

750:6.22 755:10 799:22 full-time 707:1 756:12 fully 807:23 813:18 fun 671:7 function 842:5 fund 636:5 662:2. 18 663:2,7,8 667:9 funding 657:8 663:12 **funds** 649:4,6,10 662:13,15 **future** 631:17 661:16 752:23 754:20 G G-R-I-L-E-C-H-E-**S** 791:21 game 718:13 769:24 gas 765:4 816:2, 11 gave 608:11 690:19 729:4 731:14 740:23 843:17 **GBE** 808:11 **GBX** 833:14,18 **GDP** 754:22 755:3, 13,16 **gee** 750:13 766:22 **general** 592:25 593:6 598:2

601:4,6,7 602:23

603:14,15 605:21

606:18 612:9 627:9 629:7,9 630:24 641:12,13 650:10 653:1 654:20 657:16 658:16 666:12 675:8 680:9 682:4,5 684:12 693:17 696:14 715:8 752:25 768:8,11 769:17 777:2 780:19 789:4 792:11 834:15 835:7,8 generally 592:15 596:13,18,20,22 601:11 606:6,22 611:17 664:7 666:22 696:14 717:6 727:14 760:24 773:14.19 785:21 generate 771:5 generated 836:2 generating 710:1 712:12 713:10 718:6 generation 709:13,16 710:3,6 712:20 717:14 719:11,25 720:24 819:6,19,20 generator 812:14 813:5 844:8 generators 711:5 712:1 713:1,2 813:19 842:25 843:10 844:2 generous 666:23 gentleman 657:21 676:18 give 624:8 634:7 653:12,16 666:2



671:23 686:20 689:2 698:25 700:8,9 701:14 720:25 730:22 740:9 745:6 751:11 752:2 759:8 768:7,8,14 772:21 773:24 774:19 795:18 820:18,19 824:14 832:5 835:6 843:18 **giving** 680:4

696:18,19 770:3 771:22 775:24

glad 801:2,4

global 729:1

goal 603:1,17

qoals 603:5

good 591:2,10,11 599:21 640:6 671:20 678:10 701:23 704:18.20 705:11 706:11,13 730:13 736:24 788:3,5 795:9 801:6 807:12,14 824:22 826:25 827:1 832:16,18 834:19,20 847:3

goodness 673:9

qoods 768:13

govern 621:15 663:17,20

governance 642:1,4,19,22

governed 625:11 667:1

government 636:5 639:3,4 751:18 782:12

governments 723:11

governs 661:25

grace 847:23

grad 750:4,17

graduated 757:6 **Grain** 591:22 592:8,11,22 596:10,15 597:2, 4,9,12 598:5,15 599:8,14 600:13, 14,25 601:2,19 610:17 613:2 614:11,14,21 624:23 627:18 634:16,17 636:11, 20 638:2 639:2,10 643:12 654:7,9 659:9,20,21,23 660:2,7,14,19 661:7 662:17 666:10.11 667:3 669:6,13,22 677:4,21 679:12 682:15,20 684:18 685:11 690:25 691:13,15 695:23 697:16,19,24 701:8 708:14,22 709:12,17 710:6 711:2,4,9,16,25 712:8,15,23 713:24 714:13,15 716:21 717:12 718:4,8,18,21,25 719:2,4,10,15,16, 23 720:11 721:9, 16,18,22 722:10 723:12,15,17,22, 24 724:13,14,18 725:2,16,23 726:9,23 727:17, 22 729:14 731:4

737:20 739:15 742:24 743:16 770:15 775:1,13 799:13 801:2,7 807:11 808:16,22 809:1 810:3 817:5,11,13 818:5 822:15 826:24 828:12 829:4,5,7 830:9 838:17 839:8 840:11 845:6,13,15

grand 615:24,25 670:16

grant 620:12 626:20 627:17

granted 620:13

great 601:9 625:22 749:8 758:13 765:2 766:1 767:6 772:12

greater 593:14 696:11

green 655:3

GREENWALD

687:3 704:12 800:21 822:10 826:19 830:4

grew 755:24

Grid 704:13 800:22 822:11 826:20 830:5

Grilleches 791:16

groceries 781:17, 21

grocery 781:22 782:20

gross 727:24,25 729:15,23 730:2,7 732:11 747:3,4 755:13 792:23 794:2

grosses 767:16 **ground** 775:5

grounds 633:6

group 665:16 776:19 791:5

growing 683:3 718:17

growth 747:3,4 794:13

guaranteed 700:9, 10

guess 603:24 604:15 619:10 628:24 640:11 642:6 650:6,19 684:1 688:21 705:7,15 723:21 743:25 744:12 747:7,10 748:3 750:20 752:16 764:18 765:25 767:25 768:1 770:8,19 771:8 772:2 773:25 775:19 781:25 786:14 794:6 799:21 801:2 835:6

guidance 617:24 693:21

guide 603:15

Guidehouse

793:14,19 813:14, 15 814:5,21 815:3,14 819:4, 12,18,25 820:7,22 821:5,10 837:4,22 838:3 839:16,20, 24 840:7,14,17,21 842:19 844:3

guidelines 603:6 **gun** 673:22



732:22 734:25

735:10,24 736:7

guy 760:16 769:14 guys 672:14 758:10 764:24 Н habit 699:2 **Haden** 599:21,24 600:6,8 609:22,24 610:8,9 612:1,22 613:9,10 617:5,9 618:2,4,5,8,22 620:18 621:9 622:20 623:1,3,21 625:15 626:24 628:5,13,14,22 629:15 632:8,11 633:8,21 634:1,2, 10,11 636:24,25 637:18,23 639:21 640:10,16,22,25 641:22 642:5,15, 17 643:3 692:13 698:14,17,18,23 699:6,8 700:22 745:12,15 766:15 770:19 772:2,7,25 773:3 775:4 783:20,22 784:2,6 786:14 787:3,18 791:24,25 792:5, 8,13,15,25 794:5, 8 800:11 822:2 826:11 843:17 **Haden's** 622:18 637:16 791:9 Hahn 675:21,22, 24 676:21 678:3 half 602:8 621:3 631:12 647:16 752:22 757:2

hand 639:16

795:17

701:13 735:25

handing 735:12 **handle** 662:2 **handled** 770:14 793:6 handles 612:4 **happen** 608:13 611:3 646:24 648:1,21,22,25 649:4 666:7 764:6 767:19 768:5 780:3,18 784:20. 24 785:22 838:1 839:2 happened 608:15 613:24 779:20 788:3 happening 609:21 750:7 763:22 happy 625:23 hard 660:9 741:23 766:21 771:4 harder 605:19 harvest 657:9 758:12 hassles 660:1 hate 719:7 **Hawkins** 634:15. 23 638:12 **HB** 799:9.19 **HC** 801:1,8,10 802:5 834:11 **HC-C** 798:18 **HCC** 801:19,21 838:21 head 645:19,20 646:18 670:14 675:10 810:15 815:12 **headed** 628:23

heading 601:8 heads 600:25 **hear** 621:17 654:18 660:6 663:1 738:25 742:22 771:7 847:25 heard 605:17 609:5 654:25 665:22 666:9 787:25 839:5 **hearing** 631:24 653:4 657:22 732:1 739:22 795:19 824:15 832:6 834:9 hearings 653:4 654:15 655:8 665:23 heat 612:18 heavily 784:3 640:17 641:9 667:3 helpful 638:9 744:13 792:12 **helping** 601:10 **helps** 745:1 herbicide 766:5 22 769:1 hesitate 684:22 hey 609:5 767:4 765:13

high 603:1 612:16, 19 667:4 697:15, 21 755:25 756:24 757:3 higher 666:18 751:20 753:17,21 820:25 821:7 772:12 801:8,24 higher-cost 711:4, 25 712:18 713:1 highlighted 732:9 736:20 737:13 667:19 668:3,16. 743:3 24 699:11 774:13 highlights 736:18 highly 798:24,25 801:16,18,20,24 802:4 666:4,9 701:14 **hinged** 836:2 744:21,22 779:24 hire 653:18 757:24 758:4,14 759:1,18 761:10 764:11 770:15 777:25 hired 614:11 652:6 757:13 758:20 776:4,5 778:2 779:20,22 hires 758:9 held 600:1 638:23 **hiring** 707:19 720:17,23 **hit** 605:14,19 649:3 hold 621:8 782:5 801:2 **holding** 798:19 hole 784:1 767:5 768:15,17, holistic 605:12 Hollander 643:20, 22 692:14,15 787:19 779:20 785:17,19 Holsman 644:6,8, hidden 762:17,22 10,15 646:2,7



662:24 667:11 668:25 690:20 847:18 Holsman's 645:24 667:15 687:11 home 606:1,2,7,9 736:12 758:14 766:6 homes 605:22,24, 25 606:4 656:22 honest 820:7 honestly 751:1 **Honor** 591:8 599:21 620:18 643:22 686:24 692:13,15 704:4, 8,10 719:13 729:25 731:1,25 733:2,3,13 736:5 737:14 738:1,4 739:9 740:25 741:7,13 742:4,20 791:6 800:11,25 821:24 822:2,14 826:9,11,23 829:18 830:8 hook 824:13 hope 627:12 729:25 801:19

horizon 648:6 665:11

host 614:2 720:22 751:20

hours 679:13 680:3,8,15

house 609:7 620:20,21 797:1 823:24 824:3,4

household 753:12 781:16

huge 764:12

Hull 845:17,23 846:2,10,21

human 603:3

hundreds 699:15

hurry 609:6

hustling 786:2

HVDC 594:3 599:12,13 650:3 659:2 666:16 672:5 684:6 685:24 686:18 688:14,23,25 689:4,6

hypothetical

653:12 709:25 710:19,25 714:3 717:19 727:3 771:23 775:16 776:15

hypothetically

650:6,17 724:2 761:20 839:12

hypotheticals 720:25 770:12

ı

I-M-P-L-A-N

706:18

i.e 635:12

i.e. 641:4

idea 620:25 670:20 739:5 801:6

ideal 656:23

identical 769:21, 22

identification

733:17

identified 604:13 606:2 655:12

659:12 820:22 821:4

identify 609:18 654:8

identity 841:13 842:1 843:9

idle 751:6

II 602:8 645:18 646:14,22 647:1, 24 648:1,3,8,20 649:2,5 684:5,6 813:17 817:24

Illinois 597:5
598:7,16,25 599:1
702:8,13 740:12,
19 741:17 744:20
763:16 764:14
777:9 808:11,12,
17,22,23 809:13
811:4,6,15 812:3,
4 827:15,20 828:2

illogical 635:1,13 638:13 639:23 641:5

illuminating 626:7

illustrated 604:5

imagine 593:24 661:6 763:7

immediately 637:6 677:24 693:12

imminent 608:5

impact 605:7,18 649:18,22 651:22 652:1,10,16 653:2 659:5,10 666:13 667:2,25 668:4,9 680:23 681:15 682:12 697:14 706:17 707:8 708:22 710:23 714:16 716:1,13 717:24 718:3 725:12 726:18 730:20,22 740:11 741:15 744:19 752:20 754:10 755:21,23 764:13, 17 765:4 768:12, 16,25 769:2,20 774:7 775:8,16,17 781:6 784:7 788:25 790:16 823:24

impacted 655:4

impactful 656:15

impacting 605:10

impacts 603:2,19 605:6,13 614:1,4 652:14,15 654:23 655:10 708:6,10, 11,13,15,24 709:1,3,6 710:20, 21 715:16,21 716:23 717:8,10, 19,21 720:4,6 721:4 725:13 726:8 727:11 752:14 754:20 765:20,22 773:8, 13 777:23 778:6. 20,23 779:2,15 781:1,14,24 787:9 788:20 789:10 794:2 840:7

impasse 610:19 665:5

impeachment 732:4

IMPLAN 706:17,24 708:12,20 715:11 728:22 730:14,18, 21,24 735:6 746:2,5 747:17,18 751:23 752:6 755:5,7 761:17,25 762:7 768:16



769:21 773:17
774:6 775:19,22
776:3,16,18,25
777:1,5,12 778:8,
9 779:3,17,18
781:24,25 782:16,
17,22 784:24
785:9,13,19 786:6
787:1,4,7,11,12
788:17 792:6,17

IMPLAN's 779:14
791:10,12

implementation
799:19

implicating 738:16

implication 808:16

implied 729:20

implying 729:9,11

important 614:1 621:17 658:8 664:12 726:17 760:3

importantly 775:19 781:1

imposed 596:6,10

impossible 636:22 695:13 732:2

743:18

imprecise 741:15

improper 731:17

improve 632:19 633:1

improvements 659:22

in-camera 801:15 802:4,5 803:1 804:1 805:1 806:1 807:1 inaccurate 754:14

incident 652:20

inclined 738:25 743:24

include 652:4 686:5 705:16 709:20 710:20 716:13,23 727:2 728:2 793:7,16 809:12 810:17

included 655:3 682:16 688:17 693:22 716:9 727:19 729:13,15 730:6 733:18

includes 632:17 633:4 646:8 672:2,7 724:19 760:5 839:6

including 645:4 677:11 720:23 726:23 731:15 840:15

income 728:4,19 753:13 781:15 794:20

incomplete

695:16 700:13 743:3,17,25

inconvenience 666:13

incorporate 602:2, 13,15 797:1

incorporated

603:15 604:10 693:10

incorporates 820:25 821:8

increase 649:20 667:20 671:1 752:12 increased 663:8 684:9

increases 671:3

increasing 649:15

incredibly 658:14

incremental 814:11

incur 721:15

incurred 722:16 723:4

indirect 716:20 717:2,10,16 720:1 760:23 762:16 773:4,5,6,11 775:10,12,16 778:15,21 780:12, 25 783:16

individual 703:12 769:17

individuals 748:12 762:23

induced 747:13 760:23 778:16,22 779:2,10,15 780:12,21 781:14, 24 782:14 783:16

industries 643:25 692:18 717:8 743:16 787:22 788:10,13,14 789:14,21 790:4,5

industry 682:15 717:4 730:19 747:20 752:7 761:23 762:3 776:6 788:17,19 789:3,4,5 794:2

inefficient 711:5 712:1 713:1,2

inflate 747:14 inflation 753:14

informally 620:23 information 625:4 684:13 693:20 695:17 698:22,24 700:13 715:7 759:3,8 801:25 812:17,22 828:13 831:13 837:19

infrastructure 656:3,20 764:21

838:21 839:1

initial 615:16 655:17 669:20 674:7 675:7 697:9,10 710:16 725:9 731:17

initially 624:10 655:4 686:16

initiated 647:24

injected 833:16,20

injection 813:10 820:12 821:1,8 822:24 823:1,3

injuries 730:15

inks 814:4

input 601:25 603:8,25 604:10 605:1 717:3 727:12 730:24 766:17 811:12,18, 25 823:18 824:2 827:10,14

input/output 747:18 787:12,16

inputs 794:12

inquire 613:9 629:16 658:21 743:18

inquiring 659:16

inquiry 768:2



insert 702:24 703:7 inside 608:25 insolvent 661:19 **inspect** 632:19 633:1 inspector 652:6 installation 630:16 659:2 677:16,17 678:25 installed 663:11 677:20 689:18 817:6 829:8 installing 677:5,13 installs 679:6 instance 732:4 instances 656:8, 16 657:15 intended 630:21 808:16 817:18 intending 741:1 **intends** 633:2 intent 808:21 intention 666:15 677:25 678:1 688:19 695:21 intentional 657:5 666:5 intentions 677:24 interactions 697:16 interchangeably 614:15 830:23 interconnect 840:8 interconnection 597:12 811:20,22

827:23 833:16,21

interconnections 820:11 841:11 interest 610:17 621:2,19 622:16 625:18 626:5,17 653:8 661:2 664:15 696:15,18 697:2 699:10 interested 662:25 739:7 812:24 interesting 840:15 interindustry 752:10 782:23 interiect 643:8 internal 601:11 interpret 668:14 interpretation 629:11 660:6,18 interpreted 677:11 interregional 815:6 interrelationships 752:14 interrupt 618:21 637:1 interview 779:12 intimately 636:7 639:7 introducing 625:3 introductory 625:2 **inure** 761:12 Invenergy 600:22 601:17 613:14 614:6,10,14 635:6 636:2,5,11,20 638:21 639:2,9,15 642:20 647:15 677:21,22 717:1 724:16,22,23

726:4 758:9.21 760:6,9 770:7 Invenergy's 636:7 invest 752:7 investment 724:12,16 725:3 754:20 764:10,16 774:5 814:11 830:20 831:6 investments 709:13 719:11 819:6,19,21 investors 705:19 involuntary 676:12 677:15 involved 607:5 609:17 632:6 636:21 644:23 679:2 714:20 748:12 777:4 irregardless 615:17 663:18 679:20 680:1 irrevocably 681:24 irrigation 603:19, 22 605:8 654:24 655:1,4,10 irrigators 652:15 issuance 598:16 599:1 **issue** 640:4 673:21 732:8 799:17 815:1 818:14 828:17 840:17 **issued** 599:16 635:15 643:1 735:16 736:14 **issues** 640:1,3

812:17 838:2 839:15,20,25 840:20 841:17 items 739:25 740:1 744:3 762:21 790:3 J **J-O-U-N** 824:20 Jane 672:24 674:23 **January** 702:17 **job** 629:8 708:5 713:20,21 747:3,4 757:6.7 772:24 775:8,18 794:12 **jobs** 707:2,4,9,16, 23 709:23 710:10. 13,17 726:17 752:3 755:15 756:4,6,20,22 759:25 760:3,4, 12,18,19,23 761:12 762:17 763:15,22,24 764:3 765:24 774:7,18 776:9 778:18 779:9 790:17,19 join 739:15 742:24 743:16 ioined 665:9 joining 637:13 698:1 **Jordan** 845:17,23 846:21 **Joun** 824:19,25 Judge 591:2 598:21 599:19 612:6 613:6



617:21 618:5,11,

810:2,23,24

12,20 620:17 621:8 622:1,21,22 623:14 625:15 626:11,13,22 628:12,14,20,22 629:6,16 632:8,12 633:9,11,16,24 636:25 637:9,19 639:21 640:13,23 641:12 642:5,12, 16 643:3,4,6,9,19, 23,25 644:1,3,9 662:21 667:11,12, 14 671:9,13,18,20 672:1,13,20 673:1,7,22 674:1 675:19,21,22 676:17 678:5,16, 19,23 686:19,25 687:2,4,6,7 690:13,15 692:10, 11,14,16,18,19,21 698:14,16,21 699:1,6 700:23,24 701:2,4,5,7,11,12, 17,21 703:23 704:6,9,11,13,15, 17,18 706:9,11 712:25 716:5 719:17 729:18 731:6,11,24 732:17,24 733:11, 15,19,20,21,23 734:2,7,10,12 735:25 736:2,10, 23 737:2,4,12 738:3,22 739:10, 19 740:2,5,8,22 741:1,11 742:10. 16,23 743:12,15, 22 744:5,6,12,25 745:1,9,10,12 766:10,13 770:19 772:15,25 773:2 775:2 783:19,25 784:2 786:9,14,22 787:18,19,22,25

790:9,10,12,22,25 791:2 795:4,8,14, 21,23 797:5,14,23 798:3,5,19,23 799:5,23 800:1,7, 9,10,12,14,16,20, 22,24 801:6,11,23 807:7,9,10 812:8, 10 816:24,25 817:3 820:1,3 821:20,25 822:3, 5,7,9,11,13,15 823:7,8,13,15 824:7,8,11,17,21, 22 825:25 826:5, 7,10,12,14,16,18, 20,22,24 828:6,9, 11 829:14,19,21, 23,25 830:3,5,7,9, 12,13 831:22,23 832:3,8,12,16 834:8,13,15 836:22 837:1,6,7, 10 838:5,9,14 842:14,16 843:13, 16,22 844:14,18, 23 845:3,7,11,21 846:12,16,20 847:3,7,11,13 848:3

judgment 753:8

July 735:16 736:14

jump 617:21

jumped 673:22

jumping 685:9

June 591:3 703:2

jurisdiction 620:10

Κ

Kansas 591:24 592:2 596:23,24

598:12 645:4 847:20

KC 617:10

KC-4 617:4,10 618:1 623:10 624:5 630:9 653:23 654:1 660:11 677:3 678:24 685:13,20 686:11,17

KC-5 682:13

KC-7 682:13

KC2 691:9

keeping 695:10

Kenney 731:15

KEVIN 591:13 637:21

key 836:4

kick 764:2

kicked 779:9 780:15

kids 756:25

killing 760:21

kind 601:7 631:8, 12 662:10,21 686:1 688:5,22 689:22 690:7 715:15,20 720:24 728:7 742:16 745:21 747:22 752:4 753:23 755:4 758:12 761:8 763:19 764:2 769:3 777:10 780:15 783:6 818:22 821:3 831:6 835:13 836:2,6

kinds 750:19 755:7

837:17,23

knew 801:12 843:20

knock-on 781:10

knowable 646:16, 17

knowing 681:11 696:23 700:7

knowledge 607:21 608:13,14 609:3, 10,15 613:13,15 659:14 681:3 682:6 758:21,24 784:25 787:4 798:14 821:19 825:21 834:4

Kolkmeyer 790:25 791:1

Krishna 703:11 845:2 846:22

kv 614:6

L

L-A-N-G-E 832:11

L-O-O-M-I-S 701:20

labeled 820:11

labor 713:11 714:20 715:3,9 727:19,21 750:7, 12 751:10,13,18, 21,22 759:12 794:9,10

ladder 610:10

lag 755:10

laid 603:6 604:9 716:3 774:25 775:7,15 776:2

Lamons 637:2

land 592:14 598:11 601:3



624:10,15,17 634:19 645:9 647:15 651:17,19, 21 657:1 658:25 665:20 666:11 675:13 683:8 684:9,12,18,20,25 720:25 760:10 809:13 811:3 818:22 827:15

landholders 605:19,20

landowner 595:2 601:25 602:13,15 603:8,13,14,25 605:1 610:13,16 611:3 613:21 614:1,4,17 616:10 622:10 623:7 624:24 625:8 627:17 647:3 649:14,15,20 650:7,13,20 651:17 652:7,20 653:17 654:3,9,12 656:1 658:6,11 659:21 660:15,19 661:24 663:17,25 664:2,7,8,13 665:4 666:11 667:1,4 669:25 670:21 672:23,25 679:13 680:6,7 681:15,24 682:11 683:3 688:12 693:17 694:21 695:2,10,14,24 697:4,13,16,24 799:14 817:12,22 818:5,12,19

landowner's 689:8

landowners

592:12 593:1,7,14 594:2 595:8,18 603:20 604:5

605:3,7,15,18 608:1 609:14 611:12 612:4,23 613:8,11,17,20 614:22 615:16 617:16 618:15 620:1 621:23 624:20 634:19 643:13 644:23 645:2,7,8 649:6, 25 650:2,5 651:24 652:2,12,16 654:25 655:22 657:4,10,13 658:2 659:10,13,16 660:4 661:7,17,18 664:12 665:23 666:12,14,15,19, 23 669:6 670:5,6, 11 672:5,10 675:8 676:1,2 679:2,17, 24 680:4,21 681:7,18 682:13, 19,23 683:1 685:15,18,21,24 686:4,13 689:11 693:20 694:18 695:6,22 696:6, 10,18,23 697:2,8, 11,20 698:25 699:15 700:3,8 796:24 797:2 799:16 817:23 818:17

landowners' 654:16

lands 657:6

landscape 603:16 654:21

landscaping 680:14

Lange 703:10 814:16 832:4,10, 12,17,19 833:2 834:6,16,17 836:23 840:6 842:19 843:22 844:12,19

Lange's 811:22 813:8

language 627:1,4, 13 632:20 677:15 680:24

large 605:19 653:14 665:16 763:18 764:9,10 815:22 841:8 842:7

larger 675:15

largest 635:1 638:13

lasts 619:15,16

late 737:6 847:10

late-stage 665:15

latest 746:5,15,18

lattice 593:13 683:16,19 687:24 688:11,24 689:21, 23,25

Laughter 836:18

law 598:14 606:8, 12 620:2 635:15 681:24

lawful 794:23

laws 662:8

lawsuit 777:17

lawyer 606:16,24 659:24 760:20

lawyers 761:6,15

lay 772:7

laymen 769:12

laymen's 612:8

lays 620:24 774:22

lead 812:14 813:5

lease 648:3 663:22 666:2 670:7 677:25 678:1

leave 596:4 758:6 787:20 789:21 790:6 801:25

leaves 664:21

leaving 737:15

left 637:20,24 638:5 737:7 829:25 838:14

legal 598:19 628:3,8,9,21 629:11,18 640:12, 20,24 653:19 659:24 667:10 676:16 692:1 740:19

legally 771:10

legislature 620:13 625:12

legitimate 770:20 771:1

length 683:11 730:17

lengthy 644:11

letter 625:2

letters 659:15,18

letting 847:23

level 603:1 612:16,20 731:17 766:19 769:13 835:4 838:23 844:4

license 758:16

life 619:19 709:15 710:17 719:13 725:5,14 819:8,23



light 676:18 lives 758:15 688:3 732:21 **love** 845:10 752:24 751:25 753:19 livestock 659:22 low 714:7 777:22 785:2 likelihood 684:24 **LLC** 614:15 low-cost 711:3,24 823:21 686:9 636:11 702:12 lower 753:24 **Loomis** 701:20,23, limit 726:1 load 820:23,25 815:23 24 702:6,15 **limited** 645:25 821:6,7 704:3,19 706:1,8, lump 615:3,4,24 708:23 828:15,18, 12 729:12 731:14 **local** 601:4 720:13 668:23 670:4,22 19 732:10 737:25 723:11 757:9.10. 695:19,22 696:1 740:14 766:10 linear 656:2 17,24,25 758:5,23 lunch 678:10,13 772:20 783:19 759:1,9,18 760:10 **lines** 598:10 786:10 788:4 764:2,12,17 607:24 642:6 M 791:9 795:2,4 765:17 766:5,6,19 655:25 656:13,17, 776:24 777:25 **Loomis's** 731:16, 19,21 682:7 machine 782:8 778:2 781:3,21 17 735:19 737:21 684:16 685:8 Macon 777:9,23, 691:11 719:9 **locally** 757:13 loops 782:9 25 765:15 766:23 731:9,11 734:3 lose 658:23 659:3 781:11 755:25 812:15 made 608:24,25 722:22 774:21 609:25 626:18,19 link 716:3,7 locate 788:10 843:7 636:14 639:23 810:13 **linkage** 715:23 loss 652:13 643:10 647:10 716:8 717:20 location 682:1 710:13 729:5,6 651:23 652:12 718:6 776:10 820:23,24 654:12 655:9,17 locations 720:11 821:6,7 656:4,7,9 657:6, liquor 764:25 841:11 12,15,24 658:19 **losses** 654:12 **list** 644:8,11,18 lock 648:3 664:13 669:22 679:17 713:20,21 678:8 679:10 locked 648:16 672:19 694:9,11 767:22 724:7 728:10 704:2 753:7 **logical** 720:14 791:16 800:6 lost 709:25 710:17 759:15 799:4 839:5 logically 714:19 733:9 737:7 818:12 826:4 715:1 767:20 769:23 **listed** 641:3 834:12 840:6,22 775:17 773:15 847:6 long 615:13 **lot** 604:15 628:6, 651:14,16 661:13 listening 654:16 mail 685:16 22 629:3 654:22 665:13 669:25 lists 748:16 792:4 main 599:12,15 682:4 699:17 678:11 683:10 755:15 751:8 760:18 literally 610:25 698:11 766:22 761:1 763:15 755:24 757:10 769:8 812:14 maintain 627:21 764:20,25 765:12, 758:15 813:5 821:3 632:22 636:11 847:20 13 770:12 783:12 649:22 litigate 609:13 788:23 792:23 620:4 longer 648:18 maintaining 816:6 836:7 838:2 661:20 665:6 649:17 662:6 litigation 609:1 842:24 843:13 691:18 713:19 743:9 maintenance lots 750:3 764:14 715:5 770:9 630:16 636:22 live 645:3 739:9 785:3 817:21 652:18,25 653:13 757:11 758:5,19 loud 783:23 848:1 looked 604:21 654:13 668:2,5,6, 764:14 827:7



8,9,15 680:10,13 623:23 641:8 markedly 605:3 Mclean 740:11.18 715:2,5,9 724:23 658:8 693:16 market 592:13,18 meander 644:17 725:5 696:7 700:12 594:19,24 597:13 meaning 686:7 706:16 754:19 major 764:21 615:1 649:16 764:5,15 meaningfully 810:2 672:11 684:7 765:8 male 757:1 688:7 694:14 majority 595:8 695:25 696:12 means 595:21 596:1 636:5 manage 700:14 697:5 721:14 634:24,25 635:12 643:17 696:10,23 management 751:10 641:3 660:7 **make** 601:12 680:18 681:3,17, 711:7,12 712:7 **markets** 597:18 19 687:20 715:24 604:24 605:2,3 757:10 612:11,14 610:1,15,24 765:19,25 766:4 meant 610:23 615:23 618:18 770:14 772:6 marking 733:16, 749:11 621:14 622:2 21 **manager** 776:24 623:25 626:2,3 measurable 796:10 825:7 markup 768:21 631:23 632:12 782:16 769:3 managing 607:2 638:11 641:17 **measure** 750:15 **massive** 755:12 642:13 645:21 mandates 686:6 755:16 762:15 649:13 650:25 material 801:22 manifest 835:24 768:12 778:7 653:20 658:4 813:9 822:21 837:21 838:1 779:2 780:20 660:19 667:19 materialize 814:6 781:14,18 668:17 671:23 manifestation 685:22 689:12 841:21 materialized measurement 695:16 697:9 813:16 794:1 manner 635:17 699:2,9 702:22 **materials** 717:9,22 measuring 747:19 manufactured 703:14 733:12 720:5 765:14 769:1 **MEC** 686:23 704:7 737:6 744:8 766:20 773:9 733:3 736:6 745:17 747:1 manufacturer 801:1,8,10 738:2,9 739:13 754:10 758:3,6,8, 768:25 math 594:15 742:21 743:9,16 17 760:25 762:11 map 655:3 693:24 615:23 616:3.6 800:24 801:8.14 763:6 767:3 648:7 664:3,5 822:13 826:22 768:22 770:18 maps 604:9 670:19 700:20 830:7 779:18 781:16 693:14 786:15 792:11,21 MEC's 801:21 mathematicians March 598:7,16 796:19 799:12 699:21 810:14 median 753:12 800:1 813:1 **matter** 622:6 margin 768:17 815:23 823:9,11 medical 785:16 699:25 829:11 769:2,21 792:18, 825:15 833:11,12, meet 733:7 738:11 843:8 23 839:2 844:5 20 meeting 637:3 847:21 maximize 706:1,3, marginal 656:25 693:16 5 makes 610:11 mark 738:24 745:4 621:17 664:2 **meetings** 600:1,9 **Mcclean** 741:16 marked 702:18 601:21,24 604:3,9 733:3 745:2 753:4 744:20,22 754:1 796:13,16 655:8 693:13,18, 754:4 758:2 760:6 **Mccredie** 833:17, 797:5 825:9,12 25 768:21 774:5 18 833:3,7 making 607:17,19 members 824:2



memory 791:22 mention 598:5 618:9 657:6 734:16 787:10 809:6 mentioned 613:25 643:7 650:16 677:22,23 695:12 697:13 788:16 794:20 823:10 mentioning 699:24 **mentions** 680:18 820:4 merchant 721:13 **messier** 775:14 messy 770:25 met 693:13 meter 760:20 meth 765:1 method 603:9 methodologies 787:14 methodology 745:17 746:1 772:13 773:16 776:16 787:12 839:16,20 840:19 methods 659:11, 17 787:9 Mexico 756:1 763:17 Michael 823:6 828:21,23 834:23 845:17,23 microphone 766:11 783:20,23

micrositing 658:7,

9 689:12

middle 591:5 606:17 637:15 724:11 **Midwest** 750:23 763:16,17 mike 832:14 847:17 mile 683:8,12 miles 730:17 **million** 636:17 707:9 709:14 723:14 752:7,8 776:8 784:12,13, 16 819:7.22 **millions** 723:11 776:7 mind 653:21 664:17 668:18 676:5 683:4 705:18 814:25 842:11 843:23 minimal 765:4 **minimize** 603:2,18 605:12,13 653:2 659:10 minimum 725:4 Minnesota 776:19 **minute** 736:7 740:20 742:18 772:9 **minutes** 623:1 736:25 **Mischaracterizes** 718:20 mischaracterizing 619:2 **MISO** 711:5 712:1 713:1 813:23 814:1,3,22

missed 616:25 725:20 798:5 **missing** 610:24 671:10 693:4 Missouri 591:24 592:2,5 596:23,25 597:3 598:12 599:8 606:8,11 607:3 611:7 620:2 635:15,20 636:12, 15 641:18 642:24 644:22,25 645:3,6 646:1,9,10,14,22 647:13 661:24 664:21 676:2,9, 11.14 682:12 684:9 685:15 687:2 690:22 691:1,5,13,16 694:18 704:11 707:2,9,17 708:2, 3 714:10 715:13 717:24 720:8 721:3,7 723:11 748:6 749:18,23 750:1,22 753:18 754:1 763:20 788:10 790:7,18 796:9,24 797:2 800:20 814:7 822:9 825:6 826:18 830:3 832:25 Missouri's 627:25 628:18 754:22 Missouri-kansas 607:25 Missourians 648:8 misstatement 643:10

misstates 613:5

792:9

mitigate 652:23 663:3 679:16.22. 23 709:13 719:10 812:16 819:5,20 mitigation 659:5, 9,13 667:2 680:3, 24 681:16 682:12 697:15 mix 844:5,8 **mixture** 771:21 **MJMEUC** 833:15, 19 **MLA** 690:14 706:10 739:7 800:8 821:23 826:8 829:17 **model** 706:18,24 708:12,20 710:12 715:11 725:11 726:13 727:12 728:22 730:14.18. 24 732:14,16 735:7,23 747:18 751:23 752:6 759:15 771:13 774:8,9 777:1 782:10.11 783:18 784:20,21 785:9, 20 792:7,17,21 modeling 761:2, 18 775:23 777:2 779:5 models 725:11,13 726:7 782:1 791:13 modern 757:1 modification 797:8,17 807:21 808:1 818:11 modifications

misunderstanding

742:7



815:11,16,19

816:11 840:9

596:6 649:14 650:2 656:4 657:12 694:4,5,9, 11 817:12 modified 799:16 **modify** 688:18 modifying 679:15 **moment** 632:8 634:7 643:3 646:18 740:15 820:20 momentarily 736:4 **Monday** 816:8 money 592:22 593:19 723:15,22 728:8 762:1 768:21,23 774:16 781:7,8,11 **Monken's** 793:12 monopole 593:11, 22 688:2,10,20 monopoles 683:21 688:5 690:2 **Monroe** 597:1 636:19 Monsanto 768:18 months 764:25 765:6 847:22 morning 591:3,8, 10 599:21 690:24 691:3 846:6 847:12 **motion** 642:13,15 mouthful 819:21 **move** 608:11 632:9 633:3 642:6

657:23 658:4

699:17 701:8

703:21 707:17,23 751:17 763:9 770:25 788:20 810:14 816:19 846:18 **moved** 776:21 790:4 moves 623:6 **movie** 781:17 moving 818:22 Mulligan 834:24 multiple 787:9 multipliers 777:1 **Musical** 701:11 **MW** 597:8 822:23. 25 823:2 Ν

nail 732:20 narrowing 604:11 national 793:15 natural 603:2 751:7 nature 593:10 601:7 680:15 752:25 771:19 navigate 695:8 696:7 necessarily 605:16 613:14 665:6 718:14 792:21 813:3

837:20 838:1

needed 598:17

630:17 682:2

757:5 765:18

negated 836:7

necessity 622:14

negative 608:17 708:13,18,21 709:1,4,6 710:23 713:25 715:16,21 717:13,15,19 718:3 719:24 720:1,6 725:18,24 726:8,24 730:14 732:21 773:20,22 775:8 793:2 neglected 656:25 negotiate 652:19 664:22 665:5 697:7 negotiated 676:15 negotiating 610:12,17 negotiation 614:22 619:24 658:6 666:4 697:9 negotiations 610:19 664:25 665:5,14,16,18 **net** 726:17,22 728:9 730:8 732:12 766:18 767:19 771:5 774:2 792:24 831:8 **nets** 767:16 network 604:4 693:22,24 neutral 766:3 nice 615:22 **night** 846:6 847:10 nodding 615:7 nominal 753:14,17 non-routine 654:13 668:4,9, 15,16

nonduplicative 794:13 **noon** 678:15 **normal** 722:9 781:16 normalize 756:13 north 646:11 675:8 776:21 **note** 623:12 663:6 686:5 807:5 848:3 notebook 638:8 **noted** 622:24 623:14 677:19 703:17 **notice** 614:19 679:13 680:15,16 731:3 737:8 739:5,12,23,25 740:3 812:20 noticeable 763:25 764:16 **notion** 640:2 **November** 691:14. 17,20 755:9 nuclear 721:1,7 number 594:11, 13,21 596:1 603:19 605:6,7,8 608:2 611:6 615:5,23 616:14 619:20 634:9 636:18,20,23 644:22,23 645:2, 5,7,15 646:3,16, 17,19,22 647:17 653:24 654:17 655:8 656:6.8 657:15 674:11,20 675:1,3 676:6 689:6,7,12,18 694:10 700:10 707:3 713:14



728:16 734:14 748:13 749:13,14, 15,18 753:11,17 755:13,14 756:18 776:9 779:9 783:5 784:10 792:2,6, 10,16 793:3,8 820:21 821:3 831:7

numbering

748:21,23 797:11

numbers 616:7,19 619:20 670:14 671:25 676:5,10 693:5 709:21 710:14 724:25 731:20 747:2,9, 14,16,22 748:10, 16,18 749:4 753:14 764:10 780:24 790:16 792:15 793:23 816:14

0

O&m 710:17,24 714:16,20

object 609:19,23 620:8 625:10 633:6 729:8 731:12 736:9 737:16,17 740:3, 17 743:21 770:10, 20 786:10 792:8 843:6

objected 772:3 843:20

objection 598:19 612:6 613:4 622:23,24 623:13, 14 626:11,23 628:3,21 633:13, 14,16,25 639:18 640:12,13,20

641:11,13 642:2, 6,11,13 672:15 691:25 703:23 711:14 712:16 716:2,6 718:20 719:18 729:21 733:3,4,9 738:2,5, 7 739:16 743:13, 17 771:8,9,11 772:15 774:20,24 794:6 798:23 813:15 825:25 834:8

objections 629:13 733:16 738:22,25 739:11,14 742:22, 25 744:1,8 799:1

obligated 592:11 obligations 662:9

observed 652:2 675:6

obtain 608:1 624:10 680:19 684:19 744:23

obtained 628:19 646:25 676:3,4

obtaining 812:2 827:25

obtrusive 629:1

obvious 626:3

occasionally 698:6

occur 648:3 651:25 652:15,25 654:13 680:11 730:16 841:22

occurrence 652:22 663:19

occurs 610:16 647:1 660:21 668:13 odd 753:23

offer 685:12 694:20 695:18,19, 21 697:5,10 700:19 741:1,5 798:17 825:24 845:9 846:16

offered 626:9 643:14 695:24 742:14 799:15

offering 593:1 666:16 742:17

official 737:8 739:23,24 740:3

offset 767:20

offtake 838:16

offtakers 841:4, 13,14

on-the-groundwork 600:24

one-time 652:8,9 707:15,23

ongoing 652:18 710:24 725:10,13 765:24

online 637:14,15 693:16 731:7 790:23 802:2

opening 595:19 643:12,16

operate 627:20,24 628:17 632:19 633:1 661:20

operating 630:23 713:12

operation 613:3, 23 630:16 651:8, 16 653:1 654:6 661:14 677:18 681:14 713:19 operational 760:7

operations

654:23,24 661:8 680:11 708:8,24 710:21 714:20 715:2,8 724:21,22 725:5 727:9 765:21,23 783:10

opinion 696:9,16 752:19 817:7 820:17,19,20 829:9 830:21 836:10

opinions 816:15

opportunities 656:18

opportunity

604:6,7 658:1 666:3 669:4 678:8 686:21 693:19 733:6,9 737:15 741:9 742:2 743:13,23 766:2 791:11 843:7 845:14,24

oppose 817:10

opposed 707:17 731:19 752:15 758:14

opposite 626:19 764:11

opposition 823:19

opt 650:22 746:17

optic 630:16 677:5,11 678:25 679:6

opting 650:20

option 611:20 650:20 659:21,23 660:3,7,15,19 666:25 670:4,7,8 695:21 696:1,19



697:3 698:5 **options** 603:4 604:14 696:3,4,5, 18 698:25 700:5 order 597:16,21 598:16 599:2,16 612:12 621:1 623:8 627:5 631:17 665:18 705:17 735:14,16, 18,20 736:14,16, 18,20 737:10,13, 17 738:9 739:2,5, 12,19,21,23 740:4 769:25 781:13 817:25 823:23 ordered 818:11 orders 620:12 737:24 739:1,17 organic 658:22,24 659:3,10 681:19 original 650:15 685:18 691:13.16 692:6 originally 685:21 686:13 Orscheln 766:6 out-of-state 759:12 764:24 outcomes 752:23 **outline** 657:14 785:6 **outlined** 611:18, 23 614:5 652:5 835:7 840:21 **outlines** 662:12 output 712:24 755:14,16 768:13 778:18

outputs 793:2,4

outreach 647:15 667:5 675:7 overinflating 747:22 overrule 612:6 622:23 640:13 641:12 642:12 716:5 719:17 overruled 623:15 626:11,23 633:15 642:15 775:2 overseas 720:9 **oversee** 626:20 overstate 840:7 overstated 729:17 overstating 604:19 owed 673:17 **owned** 639:3,10 640:2 641:4 owner 622:8 636:5 647:17 **owners** 622:8 ownership 607:9 608:6 611:5 635:18 636:8 639:7,16 owns 639:4 663:18 Р

P-O-U-D-E-L 703:11 **p.m.** 848:6 package 614:21 643:14,18 666:21 728:7 799:15 818:6

pages 735:13 736:17 737:9 738:23 810:4 818:4 837:2,13 840:2 paid 593:7 594:2,8 595:1 615:3,5 616:13 647:3,5 648:14,15 649:6 651:9 652:7 654:10 665:10 669:2 670:11 679:20 723:11,15, 17,22,24 pandemic 747:13 754:23 paper 785:23,25 786:5,11,17 787:10,15 836:23 **papers** 785:6 786:3,7 787:8 paragraph 618:3,9 627:14,16 631:13 632:13 635:11 659:20 660:17 680:17 681:22 693:11 736:21 743:5 746:3 818:11 paragraphs 736:19 parallel 605:9 656:2,23 paralleling 656:17 parcel 594:22 608:13 650:7 651:18

parcels 605:6 606:3 611:7 644:23 645:5,10 818:23 part 603:8 606:11 607:12,17,18

621:1 622:12 625:19,21 629:8 633:4 639:5 652:7 657:2 658:8 662:11 666:5 672:19 680:3 681:14,15 693:25 695:15 704:2 737:23 741:8 743:8,24 744:21 746:1 760:3 786:12 799:4 809:21,22 810:16, 24 814:17,18 823:25 826:4 834:12 841:8 842:7 843:3 847:6 part-time 756:13 partial 738:6 739:1 partially 722:6 participating 847:24 participation 750:7,12 751:13

parties 630:18,22 682:23 845:4,15, 22 847:15 partly 835:12

partners 842:1

parts 593:4

party 631:1 632:2 733:4,8 736:6 738:10 743:9 771:6,24

passed 625:12 785:12

passing 742:1

past 632:9 677:12 732:14

path 653:17 **patient** 785:17

Paul 767:3,17 **pause** 673:20 pay 592:12,18,25 593:21 594:7,15, 19 606:8 609:7 619:15,16,21 620:6 621:12 623:8,11 659:21 660:20 669:6,11, 13 723:18 728:1, 9,24 729:15 794:25 payable 700:17 paycheck 730:9 paychecks 728:20 payday 730:10 paying 593:4,16, 19,20 594:6,8 669:14 700:2 729:9,20 payment 592:19, 23 593:11,13 594:5,17 595:13 615:1,4,13,16,19, 20 616:8,16 617:12 619:12 647:4,5,9 650:10, 20,21,23 651:1,2, 9,18,23 652:1,3,8, 9 654:4 663:23,24 664:8 666:22 668:4 669:5,8,9, 15,17,18,20,21,22 670:7,10,12,15, 24,25 672:11 673:15 674:4,13 684:8 686:5 689:17,25 690:1,2 694:14,15,20,22

695:5,8 696:2,5,

25 698:4,6,8,11

700:9,15 818:20

819:1

payments 593:2,8, 10 615:15 646:24 649:17,18,22 650:22 651:14,23, 24 652:12,20 661:10 666:17,25 667:25 668:21 669:25 688:7,17 695:7,19,20,22 696:8 774:14 818:17 peer 785:5,12 786:25 787:6 791:10 **pending** 739:24 **people** 611:8 736:11 747:12 750:11 751:15,17, 21 756:10 757:11 758:5,15,19 759:1,10 760:8, 10,11,12 762:8,14 763:2,22 764:3,12 769:15 779:12 780:23 781:15 783:5,8 **percent** 591:23 592:1,5,7,13,18 593:1,8,9,14,18 594:16,19,24 615:1,2,16,19,20 616:13,17 619:2,3 621:12 623:8 625:21 645:12,17 646:3,8,11,12,23 647:3,4,19,20,21, 25 648:7,10,13 649:3,16,21 650:18 651:5,13 652:9 661:11 664:19,20,21,23 665:17 666:16,17 667:20 668:21,22, 23,24 669:1,5,7,8,

10,11,12,13,15, 17,23 671:1,3 672:11 673:14,16 674:3,6,8,10,11, 14,15,17,19,20 675:14 684:7 685:1,3,4,14,21 686:5 688:6 690:20,25 691:4, 12,15 692:6,8 694:13,15 695:24 696:11,25 697:3,5 700:7 708:2 713:12,13 762:19 778:11,12,16,19, 24 818:21,25 percentage 646:19 665:20 684:23,24 685:6 749:14,22 **perfect** 768:15 769:14 **perform** 662:19 715:5 726:6 performing 662:7 **period** 661:8 680:11 706:25 756:6 permanent 652:14 765:23 permission 779:22 permit 632:18,25 779:23 **permits** 744:23 812:2 828:1 permitted 635:14 681:23 permitting 744:21, 22 779:24 perpetual 627:19

perpetuity 651:15, 24 661:13 663:23 667:21 669:25 674:20 698:6,8 person 600:11 610:1 623:18 769:11 783:15 832:13 839:25 848:2 personal 664:1,11 personally 777:4 811:10 perspective 650:12 659:25 665:7 695:10 696:15 829:12 845:14,16 pertaining 625:4 Petti 709:8,11 **Petti's** 719:8 819:3 phase 596:16,18, 22 597:10 602:8 607:24 644:23.25 645:2,6,18 646:8, 10,14,22,25 647:1,24 648:1,3, 7,20 649:2,5 664:20,22 676:1, 7,8 684:5,6,10 688:21,23 762:6 774:10 799:16 813:16,17 817:23, 24 828:13 **phases** 808:18 **phasing** 596:20 598:3 808:2,15 811:3,9,13,19 812:1 823:19 827:11,13 836:8 Phd 703:11 phenomenon 669:17 775:20,24



9,12,13,15,20,21,

23,24 670:3,6,9,

			, = 0 = 0 do
phrase 632:22	771:25	713:22 730:23	positions 799:11
747:4 813:6	plans 621:19	732:13 735:15	800:2
physical 632:1	623:19 627:10	743:1,14 746:19	positive 708:6,10,
734:8	632:3 636:13	751:9 752:2,3	11,18 709:2
	677:22 699:11	760:6 770:8,18	726:24 727:11
physically 611:4		777:22 778:7	788:14 789:10,17,
pick 731:22	plant 657:8 712:13	783:13 791:14	25 790:6 793:3
picked 602:22	713:11,12,15,18,	807:5 820:11,17	
604:20	22 714:1,17,22	836:4 846:25	positively 737:21
	718:3 719:4	pointed 792:15,25	753:6
Picking 838:14	721:1,7,13 816:2	points 821:1,8	posits 776:5
picture 729:1	planting 679:18	841:11	possibility 611:9,
775:24	683:4		15,17 677:13
pie 762:8	plants 710:2,18,19	pole 767:11	831:15
•	711:12 712:7,24	poles 760:9	
piece 595:12,15	714:6 715:13 [°]	766:25 767:5	post 652:17
738:8	718:9,25 720:15	770:7	post-mortem
pink 760:19	·	noliny 622:49	777:5 779:6,7
pipeline 764:22	plausible 611:9	policy 622:18 680:19	785:2
• •	play 669:24		potential 603:21
pitching 601:12	842:11	portion 596:12,22,	604:11,13 617:18
pivot 654:24	plot 608:6	23 597:3,5,17	625:4 654:23
655:1,4,6,10	Pluta 701:23 702:3	614:16 685:24,25 736:15 741:5	655:5,9 656:9
pivots 603:20	703:21 704:3	743:3 808:11,23	657:5 666:13
•	711:14,18,22	809:21,23 810:8,	693:19,22,23,24
PJM 597:13,18	712:3,16 716:2	10,20 811:12,14,	820:10 835:14
811:20,21 827:22	718:20 719:2	25	836:7
836:3	725:20 729:8		potentially 652:23
place 637:5	731:12 732:8,23	portions 737:13	658:23 661:21
651:18 658:1	735:15 736:11	739:4	664:4,24 683:19
681:4,12 683:11	737:1,14 738:13	posed 634:14	844:6
685:9 736:24	739:15 741:13	727:3	Poudel 703:11
742:21 756:2	770:10 771:18	posit 764:18	845:1,2 846:1,10,
758:22 763:12	772:5 774:24	775:20	22,23 847:2
766:7 767:2 795:9	786:9 791:6,8,23		,
797:16 813:4	792:11,14 794:7	position 623:16,	pouring 760:16
placement 689:13	795:2	19,25 627:10 643:15 694:19	Powder 714:6,9
plan 602:3 614:16	Pnazek 600:18,20	700:12 702:10	power 711:3,5,6,8,
631:3 681:3,11,17	Pnazek's 607:2	722:14 799:8,10	11,13,24,25
723:25 728:23	point 591:21 595:2	800:4 808:7,15	712:6,8,14,18,19
729:5 732:9 801:9	604:4 634:25	811:2,9,12,18	713:1,23,25
planned 601:13	635:9,13 636:23	812:1 815:18	714:12,15,22
•	641:4,7,16 659:5	817:20 818:2,10	715:12 721:1
planning 621:22	668:11 678:10,12	823:5,19 827:11,	754:16,24 759:24
623:8 685:11	692:9 711:18,22	13,14	816:2,20 833:15,
	002.07.11.10,22		



19 835:1,13,14,18 838:19 841:21 843:1 PR 612:4 practical 694:24 practice 707:19 720:23 746:15 practices 658:22 681:18 682:15 757:25 predetermined 666:1 **predict** 661:16 784:12 785:9,14, predicted 778:25 782:7 prediction 779:19 782:4 predictions 754:19 predictive 752:23 754:16,24 759:23 predictor 787:17 preferable 606:6 preference 663:22 preferred 655:18 **prefers** 801:5 prefiled 800:6 preliminaries 847:15 preliminary 598:17 755:4 premarked 672:22 premature 657:9 **premise** 712:12 713:16 718:5 720:3

preparation 810:24 **prepare** 644:12 833:6 prepared 619:25 620:1 734:16,21 744:20 801:15 845:16 preparing 811:2, 11,17,24 presence 659:17 present 664:3 734:24 738:11 772:10 831:8 presentation 666:2 presented 653:7 664:6 727:7 735:20 741:25 815:19 816:13 preserved 745:5 **preside** 620:15 President 600:21 702:11 pressure 637:18 presuming 688:1 presumption 840:15 **pretty** 732:11 754:6 770:18 784:1 prevent 809:1 prevented 598:15 previous 594:2 597:21 620:12 623:13 644:18 647:17 686:9 731:22 737:24 810:9 821:12

previously 591:14 626:22 635:15 643:1 649:6 650:4 677:9,23 697:13 734:23 770:14 778:19 796:13.16 823:22 825:9,12 833:3,7 **price** 689:22 **prices** 840:8 primarily 824:2 **primary** 654:17 principal 610:11 principles 629:9 Pringle 671:6 687:7,9 690:12 704:18,22 706:7 795:21,23 796:3 797:9 798:6,7,8, 16,21 799:5,6,23 800:5 819:24 823:15,17 824:6, 21.22 825:4.23 826:5 830:13,15 831:21 832:15,16, 23 834:6,13 837:6,8 842:16,18 843:13,20,25 844:12 845:2.10 846:9,14,18 847:11 prior 598:15,25 599:15 613:5 647:18 659:16 679:17 680:7 685:1 734:17 807:22 **private** 618:15 634:18,24 635:12, 18 638:2,23 639:1 640:4 641:3,15 privately 640:2 641:4

privately-owned 635:12,16 643:1 privilege 606:17 **privy** 759:3 **pro** 828:12 **problem** 644:13 676:20 685:10 746:16 770:8.9 781:25 783:24 801:22 **proceed** 629:6,18 667:9 proceeding 595:23 601:12 617:19 620:9,15, 16 625:22 627:6 633:20,22 740:20 743:8 809:22,24 811:19 812:1 proceedings 591:1 621:20 622:12 627:8 675:12 676:22 848:5 process 598:11,12 605:1 617:3 620:10 621:3 622:11 625:11,13 626:16 629:7 653:19 654:3 658:6,15 665:1 676:16 677:1 710:24 732:5 733:4,10 738:5, 10,16,20 743:10 791:10 809:13 811:4,5 812:2 827:15.16 processes 607:6 628:8 695:7 720:18 processing 695:9



696:7

procure 705:16 **produce** 706:25 726:3,16 produced 768:13 producers 714:9 produces 768:18 producing 711:8, 13 712:7,14 product 660:2 755:13 776:20 production 659:11,17 713:24 715:13 717:2 productive 665:18 847:8 products 722:2 profession 794:23 professional 752:19 753:8 833:1 professionals 761:9 professor 702:12, 13,25 703:1,3,7 profit 638:14 641:14 profitable 831:8 Program 657:7 programs 715:18, 22,24 716:1,4,14 progresses 663:9 **project** 594:16 596:13,23 597:7, 12,19 598:3,6 600:15,23 601:2, 4,6,12,16 604:12 619:15 622:15 625:3 629:8 635:7 636:12 645:1,3

652:6 654:20 662:7,10,17 663:9,10,18,20 664:10 665:11 666:14 670:1 682:20 684:17 690:8 691:4,13,16 692:6 693:15,18 695:15 699:12,22 705:2,3,8,20 706:3,5,17,25 707:18 708:7,14, 22 709:12,15 710:7 711:4,9,17, 25 712:9,15,23 714:13 716:4,21 718:4,8 719:1,10, 13,16 721:9,16,18 722:7 723:19 724:12,20 725:9, 14,19,25 726:9, 16,22 727:11 731:19,20 747:3, 16 752:24 758:20 762:9 763:4,8 764:9,21 768:5 773:21 776:5 777:10 778:4 779:17,21 780:8, 11,23 781:21 783:6,17 784:17 788:11 790:17 793:13 794:13 807:22 808:12,23 810:19 811:15 816:14 819:5,8, 10,23 820:10 821:13 827:19 831:8,16 835:8, 10,12,15 836:8 840:11 841:24 Project's 719:5 **Project-wide** 594:20

projections 755:21 projects 601:18 614:10 709:16,22, 24 710:9,11 717:14,17 719:15, 25 720:2 726:3,6 815:6 **promise** 739:25 782:25 787:24 **promises** 787:25 pronouncing 791:15 proof 759:9 properties 603:21, 22 605:22 property 592:15, 19 595:12,15 603:16 604:2,23 605:9 607:9 611:7,8,13 623:7 628:1 650:9 652:17 657:1,22, 24 658:3 661:4,22 679:14 689:8.19 697:12 700:10 723:12,14,15,22 724:8 proposal 592:17 595:3,19 596:20 597:2 649:13 820:25 821:7 proposed 594:16 596:6 597:9 602:3,21 625:1 650:1 688:16 694:13 817:4,6,8, 11,17 818:5 822:20 829:3,5,7,

prospectively 780:2 prosperous 763:19 protections 661:3 protocol 652:7 659:6.9 661:24 662:11 663:17 667:2 680:24 681:16 682:11,12 817:13 protocols 667:1 682:14,16,24 683:1 697:14,15, 23,24 799:14 817:22 818:13 **prove** 608:16 provide 604:7 620:14 625:12 653:24 679:12 680:15 681:6 748:18 835:15,16, 18 provided 595:6 617:16,23 618:16 645:11 658:12 679:8 685:23 686:4,17 689:11 693:18,20,21 715:7 724:22,23 727:17,18 799:10 812:20 provider 724:2 providers 631:5 providing 604:8 717:8 provision 597:22 625:21 659:7 660:2,4 664:16 669:7 682:2 proposing 833:14, proximity 609:2 656:23



projecting 747:2,8

752:3 756:4

18

837:18 839:14

proxy 760:17
prudent 662:9 722:19
prudently 722:16 723:4
PSC 621:15 802:3 809:19
public 600:1,16 601:21 604:3,5,9, 10 621:2,18 622:15 624:7 625:18 626:5,17 635:1,20 636:4 638:13 639:4,17, 19 640:5,8 641:18 642:24 653:4 655:8,23 661:2 682:21 687:4 693:10,12 694:1 696:14,17 697:2 699:10 704:15 740:2 744:22 768:11 796:9 800:14 807:5 822:5 825:6 826:14 829:23 832:25
publication 787:1,
publications 785:13
publicly 635:13 638:15,24 640:3 641:4
publicly-traded 635:18,23,25 636:2 640:18 641:8 642:19
published 785:11
pull 634:4 653:21
purchase 809:4
purchased 722:10

Transcript o
724:1 765:15
purchases 773:10 781:16
purchasing 717:5 766:19
purely 794:2
purpose 679:15 732:18 839:14
purposes 631:16, 19 733:17 750:20 751:12
pursuant 620:13 799:17
pursue 609:1
pursuing 687:13
purview 607:2 625:13,16
put 628:24 629:4 684:22 705:7 708:16 710:12 718:9 758:13 766:4 770:7 800:3
putter-uppers 758:10
putting 700:11 739:6,18
Q
qualifies 635:20
qualifying 786:16
quantification 815:2
quantified 659:14
quantify 655:16, 19 725:17,24

840:17 843:4,24 questioning 677:3 687:12 767:24 791:10,25 809:1 815:10 questions 597:24 599:22 611:5 624:7 626:8 628:7,23 629:13 633:13 634:3 640:2 643:5,24 644:1,3,11,14,16, 18 645:8,24,25 654:22 663:21 667:13,16,17 675:20,23 678:4, 6,7,19,22 686:20, 22 687:10 690:14 692:13,17,19 693:8 694:12,16, 17 695:12 698:19 699:5 703:18 704:4 706:8,9 718:2 731:14 732:15 734:11,14 740:7 745:8,10 748:9 771:1,4,12, 17,21 772:10,17, 18,20 787:21 788:8 790:9,11, 13,22,24,25 794:17 798:10 800:13 801:12 808:19 812:5,9, 11,16 817:1,2 818:1 821:21,23 822:4,19 823:11 825:17 826:13,21 827:12 828:5,7,10 829:15,16,22 830:10,16 831:22 833:25 834:17,21 836:23,25 838:7 840:24 842:13 843:1,11 844:13,



726:21 727:5

730:20,23,25

735:7 767:18

789:9

15,17 845:8,18, 833:18 657:16 728:3 recently 808:11,22 20,23 846:2,3 731:13 747:13 readily 835:15,24 **recess** 637:8 847:25 rebar 777:20 678:15 737:3 **reading** 635:21 quick 617:21 781:9 795:13 738:8 742:21 638:1 787:23 799:12 810:5 recognize 625:23 rebates 660:2 788:8 819:24 813:14 635:5,22 666:20 rebut 738:11 690:4 740:14,17 **quickly** 753:10 reads 630:14 rebuttal 634:15 846:7 741:7 807:21 recognized 734:22 796:15.19 620:11 **quoted** 595:23 833:14 798:1,10 807:18 **ready** 673:3 810:1,25 811:11, Recognizing R 618:23 701:21 738:1 17,25 812:24 832:14 813:12 818:4 recollection **rabbit** 784:1 820:15 825:11,15, real 611:7 729:6 778:17,22 787:15 18 831:18 833:7, raise 635:17 754:22 755:3.13 836:3 11 834:1 837:3,13 701:13 743:10 756:2,7,19 762:6, recommendation 846:21,22 795:17 844:15 9,14 763:13,14 799:9 815:3 823:2 770:3,22 777:13 recall 692:5 raised 658:22 recommended 779:8 782:16 694:16,17 697:16, 738:5 837:3 843:4 799:22 812:19,25 814:9 819:24 18 698:4,7 735:9 random 604:21 835:4 778:14 809:14,15 recommending 810:12,16,20,21 range 600:3 799:19 817:21 **Realgy** 753:25 820:14 821:9 699:24 recommends realistic 775:21 831:17 rate 671:7 722:15, 799:11 realistically receive 594:4 18 750:10,13 recompensation 841:19 598:6 601:24 751:13 654:4 615:16 648:2,11 **reality** 815:17 ratepayers 814:8 649:1 659:1 recompense **realize** 618:14 rates 723:1,6 666:19,23 670:6, 660:21 21 673:7 679:25 realm 645:5 ratio 831:5 reconciliation 695:15 696:11 **reason** 597:4 654:4 ratios 831:14 723:19 728:9.11 621:21 649:1 reconstruct 729:3 730:10 reach 624:24 664:9 686:7 697:3 632:18 768:23 732:6 750:25 reached 621:4 reconstruction received 593:9 756:24 757:20 read 627:15,16 654:14 647:12 672:18 763:13 776:13 630:19 635:9 685:16 687:20 794:11 reconvene 637:4, 660:2 663:12 693:9 704:1 6 reasonable 606:5 674:3 693:10 794:18 799:4 662:20 663:1,2,6 709:8 737:13,25 record 591:2,4 808:17 826:3 667:8 683:6 738:6 739:1.4 595:22 615:8 834:11 847:5 819:10 741:4 743:4,24 628:25 632:12 receiving 672:16 753:11 785:16,18, 635:21 637:7,10 reasoning 657:24 810:19 22 786:5,7 796:23 645:22,23 671:22 **reasons** 611:18 797:1 807:23 672:19 678:14,17 recent 779:3 612:9 616:5 808:12 823:23 695:10 703:22



704:2.24 733:18 736:11 737:2,5,25 738:8,15,23 739:6,20 740:2 741:8 743:5 744:13 745:2.3.6 749:3 791:14,18 795:12,15 796:5 798:17 799:4 824:3 825:24 826:4 834:7,12 846:19 847:4,6 848:4 recorded 617:16 records 777:17, 19.22 780:7 785:3 recover 721:10. 19,24 722:11,20 723:3 724:3 recovered 723:1, 6,16,23 recovery 721:12 **recross** 643:5 698:14,18 **RECROSS-EXAMINATION** 699:7 recurring 664:10 red 748:20 749:4 redirect 671:16 692:21,23 698:13, 15,20 700:25 772:23 786:20 791:5,7 823:13,16 830:12,14 842:15, 17 844:13 **reduce** 714:19 715:9 754:16 reduced 715:2,3, 9.12 reduction 712:19

reel 772:24 refer 638:4 reference 746:21 823:1 referenced 617:25 735:19 822:20,23 827:10 839:19 references 656:6 791:17 referred 698:5 808:1 referring 602:5 610:7 695:1 719:6 749:5 810:9 838:15 refers 810:2 820:5 **refined** 693:23 reflect 665:25 715:12 730:14 767:6 reflected 793:23 **refund** 664:15 **regard** 677:3 682:11 693:8 729:18 818:9 821:12 827:13 840:10,21,22 841:15 region 835:8,18 regional 750:23 819:9 835:1 regret 666:8 regularly 637:3 regulated 641:18, 20 642:23 723:6 regulation 598:14 641:23,24 788:24 regulations 612:15

810:19 rein 783:25 related 599:5 837:4 relationship relationships 782:23 release 662:5 771:10 842:4 755:1

785:13

regulatory 649:1 relies 626:15 686:6 721:12 relocate 788:14 747:13 809:7,8 rely 781:23 784:3 815:4 remain 636:15 reiterate 840:14 703:19 remainder 694:8 646:25 681:18 remaining 665:16 682:6 715:15 669:11 673:17 739:3 747:19 837:15 845:17 815:4 820:14 **remains** 615:13 651:18 679:7 **relates** 601:16 626:5 751:9 784:4 **remand** 597:17 817:8 829:10 735:18 809:22,23 remanded 809:20 697:11 752:10 remark 622:2 **remarks** 618:6 730:19 747:20 remember 600:18 614:2 616:16 relative 621:16 657:21 713:6 638:2 751:11 760:2 791:9.24 791:13 838:25 794:16 813:25 remembering relevance 626:15 815:17 737:24 739:18 remote 751:20 removal 657:5 relevant 625:17 683:8 626:1,16 716:9 771:11 836:24 remove 632:22 838:16 840:16 678:8 reliability 819:6, removing 662:3 18,20 820:21 renegotiated 821:3 835:16 689:1 840:25 841:7 renegotiation 688:22 reliable 750:16 renew 687:2 704:11 739:13 reliably 752:23 800:20 822:9 relied 779:3,14 826:18 830:3



repair 627:21,24 reporter 618:6 628:17 632:18,25 701:18 745:7 652:13 659:21 824:18 832:9 660:14,20 REPORTER'S repairing 679:15 807:5 **repairs** 680:10 reports 726:2 739:1,16 repay 660:14 represent 654:21 14 repeat 675:12 730:9 719:19 821:2 representation repeating 730:1 674:25 741:14,21 733:14 843:23 representative rephrase 609:22, 654:8 23 648:4 654:2 729:22 814:19 representatives 600:14 693:15 **replace** 632:19 697:19,25 633:1 represented replacing 774:4 608:17 643:11 replicating 788:2 representing report 597:16 642:8 726:2,4 728:6,10, represents 724:15 12 734:21 735:2, 725:3 3,13,16,17,18,20 Repsher 711:3 736:13,15,18,20 714:11 737:9,17,21 738:9 739:2,5,12,21,23 **Repsher's** 711:19 740:4 741:20 712:17 793:9 743:25 744:17 **request** 625:23 746:7,19,22 626:5 681:7,13 747:24,25 751:12 691:22,23 692:4 754:16,24 759:23 698:14,18 722:17 791:17 793:7,11, 811:20,22 812:23 14,15 796:12,19, 21 797:4,11,25 requested 657:22 798:22 813:14,15 682:23 737:8 819:4,18 820:5,22 requesting 618:11 821:5 823:22 818:12 825:8,15 831:18 833:3,11 837:4, requests 656:5 22,23 839:24 657:13,15 658:11 840:14 682:25 691:7 739:24 827:23 report's 793:19 839:16 require 612:11 657:19 659:13

663:3 769:11 responded 634:22 812:16 837:13 required 622:4 659:1 686:6 responding 822:19 694:25 811:4 requirements responds 837:3 681:25 **response** 661:18, requires 653:13, 23 691:14,21,23 692:3 695:12 786:12 812:16 requiring 686:7 817:4 829:3.4 **reread** 719:8 837:4,14 839:22 841:2 843:13 research 702:11 788:24 responses 691:6 **reserve** 620:20 responsible 601:3 657:7 844:16 responsive 845:19 786:15 **reside** 758:19 rest 768:22 800:17 residence 608:23 restate 648:5 609:2 676:24 710:8 residences 763:11 715:19 721:17 723:21 residents 646:15 707:16 708:2 restaurants 790:18 782:21 resiliency 820:21 result 598:11 821:4 840:25 654:13 656:5 841:8 842:4 665:4 694:5 717:12,15 719:23 resource 812:21 720:1 725:18,25 820:10 835:17,19 773:9 resources 603:3 resulted 694:3 751:6,7 794:14 737:18 815:20 844:8 resulting 717:3 respect 662:6 691:11 results 746:24 754:12,13 755:14, respectfully 15 794:9 764:19 **resume** 637:19 respecting 681:25 **resumed** 637:21 **respond** 618:18 807:6 620:17 622:21 625:15 626:12 retail 722:12,21 634:20 791:11 724:3 768:17 843:19 769:1,13,20



retain 703:3 **retire** 662:9 retired 703:2 return 659:19 678:13 729:9 736:25 802:2 830:20 **revenue** 664:10 705:10 722:3 831:12 836:7 revenues 705:3 721:22 723:18 836:2,5 **revert** 686:8 **review** 673:5 693:13,25 736:22 737:16 742:3 743:23 791:10 817:11 821:15 828:12,18,19 834:23 reviewed 693:9 785:6,13 787:1,6 821:16 835:2 reviewing 689:2 820:16 **revise** 688:12 693:19 **revised** 737:19 797:10,24 799:14 800:2,3 820:25 821:7 revisions 655:9 656:9 693:22 817:4 829:3,5 revocable 648:18 rich 768:10 richer 765:7,8 768:4,7,9 right-hand 693:6

723:10

right-of-way 687:15 right-of-ways 655:23 656:11 rights 620:20 632:17 638:18,19 738:11,16 813:10 rising 684:13 risk 655:5,7 738:20 774:20 **River** 714:6.9 road 656:12 761:14 **Robert** 839:23 Rodriguez 812:15 814:13 Rolanda 817:6 828:13 829:7 role 601:15 622:14 827:14 842:11 roll 758:12 832:3 rolled 764:23 room 742:5 801:24,25 827:4,7 rough 760:17 roughly 594:1,4, 13 691:15 round 615:23 616:7 **Roundup** 766:25 768:19 769:7,11 770:5 route 591:23 592:4 599:13,15 602:5,16,18,20,24 603:2,12,23 604:14 605:4,5, 12,23,24 607:14 611:20 655:2,3,9, 11,13,14,17,18,20

656:4,15 657:16, 18 658:5 666:16 685:15 686:18 688:14 689:14 693:22,24 694:4,6 695:6 696:24 697:2 757:13 routes 604:11,13 656:9 693:19,23 routine 668:6,8,14 **routing** 600:17 602:24 603:4,7, 10.18 605:1,25 607:15 655:8 656:7 657:14 693:1,9,13,17 694:7 row 788:3 **RS-3** 828:14 **RTO** 835:23 841:15 842:9 **RTOS** 813:8 834:25 **RUBENSTEIN** 687:1 704:10 800:19 822:8 826:17 830:2 rude 770:21 rule 622:23 629:13 742:1 743:11 ruled 735:17 737:20 744:11 rules 733:3 778:3, ruling 629:2,5 632:10 633:11 740:1 run 608:12 651:17 730:24 744:4 746:22 753:7 774:5 848:3

running 600:23 708:20 713:12 runs 619:13 670:14 **Rupp** 644:5,7 667:14,18 673:5, 10 674:2 675:19 790:12,14,21 812:10,12 816:23 822:20 828:8 834:19,22 836:20 840:24 846:23 rural 677:13 763:16,17 764:14 Rush 845:17,24, 25 846:4 S S-E-O-U-N-G 824:19 **S-H-A-W-N** 832:10 **safety** 612:13 614:3 658:10 **sake** 630:23 738:23 757:2 **salary** 727:12 **sample** 617:23 618:16 686:3 **Sapphire** 740:11, 18 741:16 744:19, 23 **Sarah** 703:10 satisfied 809:9 839:18 satisfy 685:7 768:11 **save** 593:4,16,19 629:21 **savings** 594:6,16 713:15 725:8



	rranconpt of		r, zozomacki odalomonarod
814:5	797:3,7,13,15,16,	633:2,3,21	Seoung 824:19,25
scale 753:13	19,22 801:9	seeking 620:6,7	separate 612:11,
scenario 597:11,	807:12,16 812:5 822:16,18 823:7,9	649:13 812:18	12 614:15 617:13
14 627:11 648:24	826:25 827:3	sees 776:6	695:5 725:11
650:6,11,13,16	828:4 830:10		separated 725:14
658:13 669:14	838:8,10,11,13	segment 752:7	SERC 713:2
695:20 696:4,5	842:12 843:6,17	segments 604:4,6	
776:11,12 818:18	844:14,16 845:6,	655:9 730:19	series 663:21
837:24 838:15,18	12	selected 603:5	731:13 752:5,15 794:17
839:5,19	scope 611:24	604:14 605:5	
schedule 617:4,	620:9,16 726:2	selecting 603:1	serve 612:10
10,13,25 624:5	scratch 601:20	657:16	serves 612:14
630:9 674:12	683:5	selection 602:24	789:3
678:24 679:8 680:5 682:13	scroll 634:8	604:10	service 612:14
685:13,20 693:1		sell 597:18 631:1,	641:18 642:24
723:7 724:9	scrub 656:25	4 634:19 663:15	682:21 796:9
745:19 753:12	season 679:18	677:24 767:14	825:6 832:25
755:19 828:14	683:3	769:23 770:1	services 765:18
scheduled 616:23	seat 756:1 763:18	selling 632:1	768:13 773:9
637:3 679:18	seated 847:14	722:2 769:15	serving 640:5
schedules 702:17		sells 651:18	session 801:15
828:16	section 603:7 654:11 659:8	768:18	802:4,5 803:1
school 750:4,17	661:1 662:1 663:7	semantics 742:17	804:1 805:1 806:1
756:1,24 757:3	668:12 677:4		807:1,6
·	678:25 679:1,11	Senate 625:21	set 594:22 605:13
Schulte 595:22 598:19 600:4	680:17,23 681:1,	send 624:25 625:2	614:25 623:9
609:19 610:4	22,23 693:11	627:3 659:15	627:1 642:14
611:22 613:4	694:7,8 731:22	802:1	652:9 664:9
617:3,6,25 618:3,	743:6	sending 624:9	683:7,10 715:6
8,10,17 620:8	sector 776:6,7	Senior 833:1	725:13 754:6,9
621:8 622:1,3	sectors 747:19	seniority 778:3	setback 681:25
623:12 625:10	secure 662:5		setbacks 682:6
626:12,13,14 628:3,6 633:6,8,		sense 639:4	sets 671:23
12,18 634:9	secured 591:22 592:8 596:12,17	652:21 657:25 658:4 662:11	
639:18 640:6,15,	592.8 596.12,17	747:21 767:20	settlement
20 641:11 642:2	·	784:21	676:15,23
643:13,16 645:21	security 728:15 793:15 794:21		severe 754:22
646:3 671:15,19,		sentence 627:15 631:9,12 736:21	share 638:17
22 672:2,21	seeding 681:2	746:3 808:10	659:25
673:20,24 691:25	seek 621:11 623:8	833:13	shared 657:4
692:22,24 698:12	625:8 626:1,10	sentiment 665:25	682:15 693:14
700:24 701:1,11	627:5 629:23	361111116111 000.20	



		3 ,	
shareholder 638:18	side 612:4 648:18 728:15 760:20	600:7 611:3 619:22 644:21	816:1,4,12,18 844:6,10
shareholders	762:16,17 766:3, 18 767:21 773:11	646:13 653:6 661:12 667:22,24	sold 722:5 776:21
638:19 640:18,19 641:10	sideways 748:24	674:21 689:5 705:5	solemnly 701:13 795:17 824:13
shares 640:18	Sierra 686:25	sit 619:1 749:17	832:4
Shawn 811:22 813:8 832:10,19	704:9 800:18 822:7 826:16	752:22	someone's 794:25
sheet 616:22 618:13 672:3,8 673:19 736:13	830:1 834:24 sign 625:1 647:2 666:7,8	site 636:19 siting 603:6 657:11	sort 601:9,15 625:25 639:10 665:12 680:14 765:9 766:16
shift 751:21	signed 591:22 661:9 669:1	situated 622:7	775:20,23 777:5
Shine 817:6 829:7	684:15 688:9	situation 674:15 697:6	sorts 771:3 sought 603:23
Shine's 828:13	significant 684:24	size 595:6 687:13,	
shocked 633:8	685:3 significantly	15 764:16 818:21 842:21	source 606:18,19 720:5,15 748:17
shocking 611:6	593:12 598:11	skeptical 763:13,	766:8 843:1
short 716:12 765:23 795:10	666:18 675:4 696:25 700:16	14	sourced 714:5 717:23 762:20
815:16 short-term 756:15	signing 615:15 651:7 670:21	Sky 740:11,18 741:16 744:19,23	spaced 683:16,23
shortly 637:13	760:10	slice 762:8	speak 642:22,23 648:23 652:24
689:9	similar 631:8	slide 750:14,15	699:23 732:6
shot 843:18	652:15 685:12	slow 772:8	790:23 814:16
shoulder 736:7	686:9 732:13	small 595:12,15	832:13,14
show 748:4	739:10 764:21 818:15 831:2	596:1 605:7,18,20	speaker 848:1
767:19 776:10	similarly 607:7	606:3 650:7	speaking 598:2
785:8 841:14	622:7 789:13	763:19 782:1	599:12 612:7 688:13 839:22
showed 769:9	796:24	smaller 605:21 818:23	special 744:23
showing 616:16 767:17	simple 658:4	snapshot 752:14	specialized 721:2
shown 693:23	simplify 760:5	social 728:15	specific 599:3
	simply 729:15	794:21	607:16 613:19
shows 748:5,13 754:1	840:17 842:4	soft 832:12	628:20 629:10,18 630:4 632:3
shut 711:20,21	single 708:21 736:20	software 708:15	636:13 656:6,8
712:11,13 713:18	sir 591:10,20,25	761:18,19 777:3	682:9,25 684:22
715:4 770:20	592:3,6 596:8,14,	soil 681:2	694:9,10 697:6, 12,22 698:17
shuts 714:22	19,21 597:1,6,23	solar 785:12	699:23 726:5
shutting 713:9	598:4,9 599:7	815:20,23,24	777:2 816:13



	rianconpt of		on a common of a common of the contract of
817:21 841:4,12	spraying 767:1	836:12	650:4 658:14
specifically	sprays 769:19,20	stand 591:5	665:2 668:1 676:1
601:15 603:10	• •	637:21 754:12	685:11,14 696:21
609:4 614:11	spread 763:7	795:15 846:23	727:1 747:22
629:23 630:7	spreadsheet	847:1	813:21 814:1
655:6 658:18	700:19	standard 626:17	statement 595:20
663:5 664:5	stack 604:16	651:4 667:4	639:18 643:12,15,
684:12 686:6	otoff 604:15 17	672:5,9 697:15	16 668:12 691:2
729:19 731:4	staff 624:15,17 687:6 704:17	705:2	694:19 703:12
809:14 820:14	796:19,21 797:4,		715:1 800:4
specificity 728:23	10,25 799:3,11,19	standards 697:21	808:21 823:5
	807:21 811:21	794:2	831:4,13
specifics 715:4 731:19	812:19 813:7	standpoint 658:10	statements
	814:21,23 815:1,	stands 633:11	639:23
specifies 674:13	6,16,24 816:5,9,		states 652:11
speculate 685:6	13,17 817:7,10,20	start 598:25	654:11 659:20
-	818:10 821:14	615:15 650:22	681:23 684:17
speed 617:3	822:20 823:5,14	651:5,9,11 665:1 796:20 801:18	699:13 712:17,18
spell 701:18	824:2 825:15	812:14,21 829:4	770:16 808:10
791:19 796:4	826:3 827:12	847:7	840:6
824:17 832:8	828:12,21 829:1,		static 662:21
spend 752:8 762:1	2,9 830:12	starting 634:12,13 635:9 670:19	
spending 716:24,	831:17,19 833:11	695:3 752:2,3	station 596:24
25 781:11	834:11 838:3	847:12	636:19
apant 776,7 11 12	839:24 840:1 841:17 842:15		stations 841:10,12
spent 776:7,11,13 777:19 781:1,2,7,	845:13,17 846:5,	starts 634:23	statistic 751:15
8 784:16	7,19 847:5	833:13 837:11	statistical 778:13
	,	state 611:9 623:19	
sphere 785:5	Staff's 795:9,16	627:10 634:9	statistically
spirit 604:19	796:12 799:8,10, 22 800:3 808:7,15	635:2 638:14	750:22
split 755:25	811:2,9,12,18	639:11 655:20 664:21 665:15	statistics 751:18
spoke 791:12	812:1,25 813:9,	701:17 702:4,13	782:12
•	11,14 814:25	707:7 711:10	status 718:10
spoken 832:13	815:17 817:15,17	717:23 723:10,13	811:20 827:22
sponsored 798:21	823:2,19 825:8 827:10,14 833:2	754:4 758:13	statute 620:5,7,14,
spot 797:24	845:1	763:16 770:17	24 623:11 627:25
spots 797:21,23		781:4 788:15 790:7 796:4	633:13 661:2
SPP 713:2 814:12	stage 658:15	809:11 810:19	statutes 606:14,
	684:18,20		20,22 607:4
spray 766:25	Stahlman 798:21	state's 758:18	620:14,22,23
767:5,11 770:2,4,	823:6 828:21,23,	stated 597:17	622:5,7 625:11,12
5,7,8,9	24 836:14 844:17	609:20 610:16	628:8,11,18
sprayed 769:6,10	Stahlman's	633:7 639:6	629:11,19
		642:25 648:10	



stay 737:6 789:22 801:20 847:9,14 **steel** 717:4 752:9, 11,12 **Stemme** 643:23, 24 692:16,17 787:20,21 800:12, 13 822:3,4 826:12,13 829:21, 22 STENOGRAPHER 671:5 791:19 **step** 757:3,5 824:9 **steps** 598:17 811:4 812:22 813:4 stock 638:18 stock--is 635:19 **stop** 610:12 635:21 667:5 **storage** 815:25 816:9,11,17 844:6,11 **store** 766:6 767:13 768:17,21 769:2 781:22 782:20 816:19 **stores** 765:5 storing 725:12,14 storm 813:24 814:8 **story** 765:10 straight 771:6 straight-up 733:4, 10 Strategic 702:11 strategies 629:18 strategy 629:11

680:4

streams 605:9 831:12 strengths 791:12 **strike** 642:6,13 724:8 796:22 stringing 760:16 **strive** 606:4 stronger 789:2 strongly 622:3,18 **struck** 796:25 **structure** 593:1,8, 10,17,19,21 594:14 618:13 636:8 639:7,11,16 649:17,21 650:8, 10,21 651:1 658:24 666:17 672:3,11 684:8 688:10,11,17,19 689:3,10,17,21, 22,23,25 690:1,2 694:14,15,22 696:12 697:1 700:9 722:1 752:11 818:16,24 819:1 structured 651:2,3 structures 592:14, 19,23 593:5 594:1,3,6,7,8,11 595:1,12,14,16,17 657:1 661:22 662:4 683:7,11, 16,19 687:24 688:2,4,20,22,25 689:6,7,12,13,18 690:6,11 694:21 695:5,8,14 700:10,15 717:5 752:9 762:18,20

785:16 813:7 814:12,16 839:9 **study** 602:25 603:7 605:25 613:8 656:7 657:14 693:1 694:8 706:2 708:1 709:7,20 710:15 720:12 721:5 724:12 727:8 730:2 745:16,25 754:11,12,17 767:2 772:11 779:22 780:2 786:1 787:1 788:9.21 789:23 813:22 814:6,21, 24 815:3,14 819:13,25 821:10 831:6,10 838:3 840:1,18,21 842:19,22 844:3 stuff 771:22 **subject** 592:10 596:5 622:10 643:5 699:25 715:15 727:10 730:13 750:3,18 791:22 801:12 809:24 840:24 843:8 sublimated 765:10 **submit** 796:15 825:11 submitted 602:25 693:15 735:3 828:13 subparagraph 630:8 subscribed 813:18 Subsection

660:13 substance 623:4 626:25 630:3 633:9 686:15 substantially 685:12 successfully 663:3 **sue** 609:6 620:1 621:22 625:8 660:5 **sued** 608:1 **sues** 623:6 **suffice** 734:9 sufficient 663:9. 12 705:3 722:3 744:25 794:11 **suggest** 655:16 663:24 774:25 suggested 694:19 suggestion 663:2 **suit** 608:12 610:12 **sulfur** 714:7 **sum** 615:3,4,25 668:23 670:4,22 695:19,22 696:1 782:24 summarizing 836:9,12 **Summary** 741:18, 20 summation 835:9 841:5 **super** 678:11 supplier 722:10 supplies 765:14 **supply** 717:7,21, 22 720:4 752:13



773:8

studied 788:13

studies 727:7

support 707:3 717:5 735:24 794:11 807:21 supporting 601:3 811:8 **supports** 593:17, 19,21 771:20 **suppose** 726:11 supposed 691:22 699:18 720:10 772:11 782:7 supposedly 711:3,24 suppressed 747:10 surrebuttal 597:25 600:5 634:4,13 638:6 639:22 641:15 684:16 702:16 703:6,9 734:15,19 751:4 812:13 828:14 837:2.8 839:23 840:3 **survey** 779:8 781:19 **survive** 831:11,16 **suspect** 683:18 **sustain** 628:21 633:24 640:24 729:21 733:15 772:16 sustained 633:12. 15 744:1 **swear** 701:13 795:17 824:14 832:4 **switch** 665:14

690:8 819:2

sworn 591:14

701:25 733:5

795:25 825:1 832:20 synonymous 705:9 **system** 718:23 734:6 789:3,11,22 820:12 systems 655:4,5,7 835:1 tab 617:6 638:7 table 620:25 638:9 748:7 773:14 792:1 793:23 815:19 819:9,15, 17 820:5,6,9,15 821:13 tactical 609:13 tactically 609:11 **tactics** 666:5 tailor 726:5 takes 683:7 763:12 taking 606:13,20, 22 607:3 620:5,24 627:25 628:18 637:5 726:18 739:5,11 740:3 747:18 750:7 755:7 767:22 809:25 takings 620:24 628:19 talk 599:25 601:15 615:2 641:1 645:10 755:21 757:9 761:1 767:7 773:4 786:5 792:23 835:4

Т

talked 602:9 681:19 776:12 785:23 814:14 815:14 816:7,8,9 talking 602:6,7,8, 9,19 603:9,10 607:23 624:4 630:2,4 638:1 668:21 713:21,23 725:10 745:3,18 748:1 750:21 760:3 761:6 762:25 772:5 779:5,7 813:13,23 840:10 talks 746:3 target 665:19 818:22 **Tartan** 621:2 625:18 626:17 768:2 770:24 784:4 831:20 tax 728:15,19 794:21 taxed 765:1,17 taxes 723:12,14, 16,23 724:8 728:4,21 729:6,9, 20 794:21 team 600:15,16,25 601:2 606:23,25 607:3 609:12,16 610:1 612:24 683:14 690:10 693:9,13,17,21 695:7 696:6 698:2 758:5,9 764:23 teams 601:11 technical 602:19 614:3 693:21 telecom 630:11 631:1,23,25

telecommunicatio **n** 630:14 631:5 677:14 telecommunicatio **ns** 677:4,9 679:1 telling 613:2,7 762:12 767:4 782:15 tells 674:16 temporary 652:14 ten 623:1 770:6 ten-minute 795:11 tenants 659:16,22 660:15 tend 656:19 762:17 tender 704:4 799:24 826:6 834:14 term 627:20 640:8, 11 659:23 698:9 750:2 765:23 831:18 terminating 662:4 terminology 721:14 **terminus** 843:10 terms 610:2 617:12 620:6,7 621:15 628:17 629:24 630:5 633:19,20 649:25 651:1,3 653:8 664:9 667:4 682:4 687:15 696:7 704:24 705:7 713:16 725:5 728:16 732:10 751:11 775:24



778:8 785:22

818:19 820:23

842:24 843:14

	rranscript or	Proceedings June 07	, 2023index. tertiarytiming
821:5	795:5,18 796:15,	764:10 765:19	649:14,19 650:14
tertiary 780:15	19,24 798:2,11	766:4,20 780:19	655:2 672:10
-	807:18 810:2,6,	781:2,9 782:22	675:5,17 685:25
test 784:5	17,25 811:11,18,	800:1 824:1	686:4,17 687:14,
testified 591:14	23,25 812:13,24	thinking 609:4	23 688:1,13,15,
611:23 628:9	813:6,8,12,25	621:10 750:1	20,24 696:10,24
642:3,9 653:3	819:3,17 820:4,15	760:8 774:19	817:14,19,23
657:21 696:9	824:14 825:11,15,	thinks 801:7	818:17 833:16,20
701:25 711:3,24	18 827:5,8 831:24		tight 751:10
738:19 788:22	832:5 833:7,11, 12,23 834:1,23,25	third-party 631:4	tiles 652:14
790:15 795:25	835:3,5 836:1,11,	677:11	
825:1 832:20	13 837:14 839:23	thought 610:23	time 599:15 605:2
testify 641:14	840:3 844:19	668:16,24 679:10	608:6 611:5
642:4,9 735:21	845:9 846:5,11,	742:6,13 750:25	626:13 629:21
772:1 840:13	13,21,22	751:2 767:17	648:2,6 656:18
846:25		783:22,23	659:15 660:9
testifying 800:3	Texas 758:11	thoughtful 816:15	664:9,23,25
, ,	text 606:21,22		665:6,11 666:15
testimony 591:19	625:7 626:8,10	thoughts 815:13	675:16 677:7 678:11 679:14
594:12 596:5	628:10 681:1	three-page 736:12	680:5 681:7
599:25 601:14	686:15 732:9	740:10	683:6,7 689:5
611:19,24,25	theater 781:17	three-year 649:4	692:9 695:19
614:5 634:4,13,15		706:24 756:6	696:2 698:5
636:10 638:12	theoretically	762:8	701:22 702:22,25
639:22 641:8	757:3		703:15 706:7
642:25 645:11	theory 638:17	threshold 822:23	731:2 737:7
652:11 653:4,7 654:19 677:19,23	thereof 788:25	823:2	741:11,23 742:22
683:24 684:16	11161601 700.20	throw 791:4	746:6 752:4,15
685:8,14 686:11	thermal 612:18	throwing 610:20	753:13 763:18
691:12 697:17	815:25	throwing 619:20	764:9 787:4
698:24 699:11	thing 606:15	tick 818:20	796:18 798:9,17
700:1,3 701:3,9,	671:21 675:10	ticking 665:8	799:20,24 801:4
14 702:16,22,24	718:14 745:22		808:5 810:18
703:5,6,10,15	753:25 758:13	tie 626:6 656:13	825:14,24 826:5
706:21 709:8,11,	759:2 767:9 771:6	tied 616:25 763:3	833:10 834:7,13
19 710:1 711:1,19	774:1 777:21	841:25	837:19 843:21
712:4,17,25	783:10 784:7	ties 755:20 760:21	846:18
716:17 718:18	things 605:3		timeline 808:18
719:7,9 724:9	634:18 642:9	Tiger 592:7,17,23	
727:7 731:16,22	645:8 656:17	593:2,5,7,13,21	timelines 811:13
732:3,18,25	666:24 673:23	594:4 600:1	827:18 828:1
733:5,7 734:15,	680:10 681:1,20	602:5,7,10,16	times 656:21
19,22,24 735:4,19	746:17 750:6,20	603:1,18,22 607:14,15 611:12,	timing 608:5,12
738:6 745:20	751:8,14,21 752:9	20 612:9 613:1	811:5 827:15
770:16 771:20,22,	761:18 762:18	614:23 627:11	011.0027.10
24 773:6 774:13		014.20 021.11	



Transcript of Proceedingsine 07, 2023index. titleunderemploymen					
title 645:7 703:3	touch 801:10,13	707:18 717:14	turning 808:9		
titled 744:18	touches 801:7	719:25 724:15,16 730:16 789:3,11,	turns 759:22		
titles 702:10	touching 801:1	22 815:6 817:7	twenty 670:16		
today 602:6	tower 593:13	829:8 835:8,17,19 841:9	two-month 847:20		
631:24 643:21 700:1 701:9,10	690:4 757:18 758:10	transport 766:21	two-page 735:13		
703:18 738:19 749:17,23 750:18, 21 752:22 780:3 798:10 825:17	towers 653:13 655:1 758:11 town 763:19	travel 651:21 833:15,20 Travis 819:15	type 666:6 689:7 694:25 730:20,23 761:22 775:8 799:16 821:9		
827:5 829:1	towns 763:17		types 627:18		
833:25 847:9	765:2	treat 661:7 831:6	688:19 690:5		
told 606:16,24	track 611:5 700:2	tree 657:11,17,19 683:8	726:2		
613:23 657:25 759:14 767:3,17	tracking 700:5,6	trees 657:6,8,9	typical 726:2		
tolling 608:5	traded 635:13	680:25 681:21	typically 610:14, 16 617:16 625:2		
tomorrow 740:1	638:15,24 640:3 641:4	trembling 745:12	632:6 645:10		
847:7,10,12,19 848:6	tradeoff 746:14	trenches 612:12, 16	683:3 713:13 726:6 728:5		
tomorrow's	tradeoffs 751:5	tricky 750:20	765:14 766:20		
847:25	tradeouts 766:2,3	trigger 651:23	U U		
tool 776:22	trails 598:12	true 592:4 599:8			
tools 732:12	training 697:21	601:21 612:1,2	U.S. 639:11		
top 608:20 631:9, 11,13 638:6 645:19,20 646:18 660:13 672:24 747:9 748:4,20,24 784:11	trainings 697:22 transcript 731:3,5, 8 732:19 733:1 734:4 737:9 808:24 809:16,21 810:4,6,8,11,16,	638:21 656:16 691:17,18 698:1,3 708:12,21 712:12 720:3 759:22 761:2 782:11 793:7,11,18 794:23 798:13	Uh-huh 616:2 648:9 748:2 780:4,17 ultimate 602:21 752:16		
topic 608:18	22 823:24	825:20 834:3	ultimately 603:9, 25 604:25 612:17,		
torn 774:11	transcripts 732:3	Trust 788:2	19 655:10 665:17		
total 593:6 597:7 605:6 674:4,8,13, 23 689:14 707:5,	transferred 661:4 transmission	truth 701:15 795:19 824:15 832:6	699:13 723:16,23 754:17 790:3 unbuilt 709:24		
8,12 724:12,24 728:7,10,16 730:5,6,22 748:5, 15 749:15,16	600:21 622:8 624:3,9,25 627:2, 21 630:17 631:7, 15 632:14,23 655:25 656:17	turn 591:18 676:18 693:5 706:20 716:16 723:7 724:9	710:11 unclear 610:6 669:12 675:10 741:18 745:18		
755:20,22 773:13 778:23 784:7	661:14,20 666:19, 24 677:6 680:18	748:14 768:24 778:2 807:17	undercuts 754:23		
1.1.1. 770 47			underemployment		
totals 778:17	682:7 683:7,11	turned 776:20	750:19		



underlying 616:24
621:14 625:24
758:3,17 759:23
771:13,20 840:18

understand
608:16 612:2
615:23 638:12
640:12 641:7
642:16 644:18,19
648:6 650:25
651:20 666:12
673:12 699:3,9
727:6 741:10

839:12 Understandable 818:3

745:17 747:2

751:6 752:18

754:13 755:2

25 770:11,24

771:8,9 782:6

794:11 818:20

784:2 786:3

760:14,17,22,23,

understanding

612:8 630:24 638:25 639:8 648:19 657:18 663:16 666:18,22 808:25 814:11 815:21 817:15 828:16

understood

645:24 696:21 725:16 730:4 767:23

unemployment

749:14,22 750:10, 16,19 751:15

unfortunate 623:5

unfounded 635:1, 14 638:13 639:23 641:5

unintentionally 666:5

union 758:23 759:9 777:25 778:1,3

unique 645:7 754:6,9,21

unit 662:23 713:10 714:23 715:4,5

university 702:14 703:2 776:18

unknown 843:15 844:1

unknowns 843:14

unprobated 611:7

unreasonable 738:20

unusual 754:15

up-front 650:21 663:23 664:8 669:5,18 670:15 724:19

update 691:21,23 692:3 778:8

upholding 697:21

upper 593:25

upside 771:3

Uri 814:8

usage 714:8

USDA 657:7 658:23

users 835:13

Utah 758:11

utilities 622:17 624:21 635:2 638:14 641:19

utility 635:20 641:19 642:24 715:17,22 723:6 724:2 788:24

utilize 655:23 656:10 658:22

utilized 657:7 714:4

utilizes 840:14

٧

vague 610:6

validity 735:23 814:25 815:10

valuation 675:15 697:12 700:6

values 594:22 664:8 684:9,12 814:5 815:20 816:8

variables 700:2 708:16

variance 687:20

vast 595:8,24 596:1 643:17 696:10,23

vastly 844:9

vegetation 680:18 681:3,16,18 687:20 765:18,25 770:14 772:5

vegetative 766:4

vehicle 653:14

verify 646:4 780:22

version 685:17 686:9 798:24,25

versus 602:20 626:9 635:6 640:3,5 685:24 694:14 696:19 753:4 758:5 769:5 792:24 816:11 818:25 844:10

viability 597:19 705:6,22 831:1,2, 10,18,19

viable 653:15 665:6 705:8

Vice 600:21

view 604:6 622:14 816:10 837:23

views 816:5

violate 738:10

violates 742:1

virtual 693:16

virtually 732:2

vociferously 770:19

Volume 810:4,13

voluntarily 621:24 626:9 646:25 665:9 676:4,8

voluntary 591:22 592:12 621:4 624:11 625:25 627:4 629:24 647:2,12,25 648:11 658:13 660:22 661:9 663:22 664:20,24 665:14,17,20 676:7

W

W-O-N 824:20

wage 751:11

wages 708:5 716:24,25 725:8 727:12,16,24,25 728:6,12,14 729:13,23 730:2,



June 07	, 2023Index:	wait	year
---------	--------------	------	------

	<u> </u>	<u> </u>	, , , , , , , , , , , , , , , , , , ,
3,7 751:20	740:15 741:7	woefully 743:2	713:14 747:12
wait 801:4 847:20	742:20,24 800:25	Won 808:20	756:11 759:19
waiting 671:16	801:17 807:9	824:11,19,23,25	779:1 781:20
846:24	822:14 826:23 830:8	825:23 826:25	785:5
		828:7 830:16	works 699:18
waived 800:17	white 614:5	831:21,24	752:6 786:4,19
waives 681:24	677:19 683:13 690:10 760:18	Won's 817:4	787:4 846:9
walk 610:10 621:9 694:8 815:13	761:8	wondered 837:14	worksite 762:23, 25
	White's 594:12	word 702:24	world 620:19
walks 694:10	611:19,23	712:10 833:17	756:2,7,19 757:2
wanted 611:13	wholesale 768:24	words 627:24	762:6,9,14 763:14
622:1 638:11	wide 699:24	632:25 633:4,22	770:3,22 777:13
668:17 669:18		665:24 732:6	779:8 782:16
704:23 737:15,16 745:22 784:9	widely 776:22	796:22,25 797:18	worrisome 752:5
790:15 810:15	Williams 687:5	work 601:17	worse 595:18
815:8 823:9,10	704:16 733:21	603:13 614:11	605:3 649:25
827:11 848:1	734:8 740:2,5	654:7 659:9 708:1	650:5 818:19
wanting 617:22	800:15 822:6	745:21 751:11,20	
813:1	826:15 829:24	757:22,23 758:6 763:12,15,16	worth 677:8 769:7
	wind 740:11,18	770:12,13,10	wow 764:2
warmup 755:4	741:16 744:19,24	778:4 783:6	wrap 784:5
warranty 660:1	777:11,18 779:23 785:12 815:20,22	814:15 825:6	wrapping 783:1
waste 769:15	816:1,4,9,11,18	worked 614:9	wreck 785:19
wave 846:24 847:1	844:6,10,24	777:18 780:8,11,	writing 788:24
ways 656:15	wind-up 662:19	23 783:13	writings 744:3
787:11	663:10	worker 728:9	
weak 789:21	winter 813:24	729:5,7 730:9,15 761:22 777:18	written 681:4 693:14 818:1
Webex 847:24	wire 752:9	781:20	
website 682:20	wires 658:24		wrong 616:22
		workers 707:17,23 720:11,13,15	703:12 745:24 751:2 764:22
Wednesday 591:3	wishes 743:4	720:11,13,13	765:9 769:13
week 699:12 760:19 761:1	withdrawal 813:10 822:24 823:1,3	728:3,11 729:3 730:21 750:8	wrote 703:1
weekly 637:8	withheld 728:3	756:13 760:2	WSP 600:17
weighing 696:17	witness's 611:24	761:20 774:25	602:25
	617:6,7 732:25	778:3 781:11	Wyoming 714:8
western 843:10	witnesses 718:18,	794:18	717:25
wheat 758:12	21 719:3 795:16	workforce 750:8,	
WHIPPLE 686:24	843:4 845:13,18	14,15 757:5	Υ
704:8 733:2 736:5 738:1,4 739:13	846:5,8 847:25	working 627:13 654:9 699:22	year 598:7 601:22



615:21 616:13 651:6,7,13 661:11 667:20 668:23,24 669:23 670:13,16 671:1 673:16 674:11,18,19 691:20 709:14 719:12 723:13 746:8,13 755:8,11 756:8,9,20 759:2 763:1,23 767:1 774:23 778:8,9 783:14 819:7,22

year's 755:10

years 607:9
619:15,16 647:4,
6,21 648:12,14
650:19 657:12
665:10 669:2,3,9,
10 670:3,22
707:5,12 724:21
725:5 747:9
752:21 756:5
780:5 783:3

yesterday 658:20 662:22 814:14

York 614:7

Ζ

zero-sum 718:13 769:24

zinging 760:20

