## STATE OF IOWA DEPARTMENT OF COMMERCE UTILITIES DIVISION

- - - - - - - - - - - - )

IN RE:

:DOCKET NO. RPU-2019-0001

INTERSTATE POWER AND LIGHT

: VOLUME III

COMPANY

Iowa State Fairgrounds
Varied Industries Building
Second Floor
3000 East Grand Avenue
Des Moines, Iowa
Wednesday, October 9, 2019

Met, pursuant to adjournment, at 8:30 a.m.

BEFORE: THE IOWA UTILITIES BOARD

GERI D. HUSER, Chairperson (Presiding) NICK WAGNER, Board Member RICHARD W. LOZIER, JR., Board Member

(Pages 569 through 774)

EDIE SPRIGGS DANIELS - CERTIFIED SHORTHAND REPORTER

| F                               | Filed with the lowa Utilities I | Board on O | ctober 29, 2019, RPU-20                      | 19-0001             |
|---------------------------------|---------------------------------|------------|--|---------------------|
|                                 |                                 |            |  | 573                 |
| 1                               |                                 | <u>I</u>   | <u>N</u> <u>D</u> <u>E</u> <u>X</u>          |                     |
| 2                               | WITNESS                         | DIRECT     | CROSS REDIRECT R                             | ECROSS BOARD        |
| 3                               | For IPL:                        |            |  |                     |
| 4                               | Roger Morin                     | 577        | 579(Long)                                    | 583                 |
| 5                               | Wendi Cigrand                   | 584        | 607  | 585                 |
| 6<br>7                          | Neil Michek<br>(recalled)       |            |  | 656                 |
| 8                               | David Vognsen (recalled)        |            | 747  | 742                 |
| 9                               | Neil Michek<br>(recalled)       | 752        | 763 766<br>(Tipton)<br>765 768<br>(Van Loon) | 771 767<br>(Tipton) |
| 11<br>12                        | For OCA:                        |            |  |                     |
| 13                              | Sheila Parker                   | 614        | 618  | 616<br>620          |
| 14<br>15                        | Blake Kruger                    | 621        | 631 634<br>(Callisto)                        | 622<br>632<br>636   |
| 16                              | Marcos Munoz                    | 638        | 651(Callisto)                                | 639                 |
| 17                              | Scott Bents                     | 663        | 670 672<br>(Callisto)                        | 664<br>671          |
| 18<br>19                        | Seth Davison                    | 673        | 675(Callisto)<br>688(Frank)<br>693(Callisto) | 694                 |
| <ul><li>20</li><li>21</li></ul> | For LEG:                        |            |  |                     |
| 22                              | Robert Latham                   | 705        | 706(Frank)                                   |                     |
| 23                              | For ADM:                        |            |  |                     |
| 24                              | Robert Stephens                 | 710        | 710 715<br>(Callisto)                        | 713<br>718          |
| 25                              |                                 |            |  |                     |

| Filed with the Iowa Utilities Board on October 29, 2019, RPU-2019-0001 |   |  |  |  |  |
|--|---|--|--|--|--|
|  | 574   |  |  |  |  |
| 1  | <u>I</u> <u>N</u> <u>D</u> <u>E</u> <u>X</u>              |  |  |  |  |
| 2  | <u>WITNESS</u> <u>DIRECT CROSS REDIRECT RECROSS BOARD</u> |  |  |  |  |
| 3  | For DAG:  |  |  |  |  |
| 4  | David Berg 718 719  |  |  |  |  |
| 5  | For the Environmental Intervenors:                        |  |  |  |  |
| 6  | Kerri Johannsen 729 734(Callisto) 730                     |  |  |  |  |
| 7  |   |  |  |  |  |
| 8  | E X H I B I T S   |  |  |  |  |
| 9  | OCA HEARING EXHIBIT RECEIVED                              |  |  |  |  |
| 10   | 1 583   |  |  |  |  |
| 11   | IPL HEARING EXHIBITS                                      |  |  |  |  |
| 12   | 9 and 10 703  |  |  |  |  |
| 13   | BOARD HEARING EXHIBIT                                     |  |  |  |  |
| 14   | 4 749   |  |  |  |  |
| 15   |   |  |  |  |  |
| 16   |   |  |  |  |  |
| 17   |   |  |  |  |  |
| 18   |   |  |  |  |  |
| 19   |   |  |  |  |  |
| 20   |   |  |  |  |  |
| 21   |   |  |  |  |  |
| 22   |   |  |  |  |  |
| 23   |   |  |  |  |  |
| 24   |   |  |  |  |  |
| 25   |   |  |  |  |  |
|  |   |  |  |  |  |

## PROCEEDINGS

CHAIRPERSON HUSER: The Iowa Utilities Board is in session.

The Board moved into closed session pursuant to section 21.5(1)(f) allowing the Board to conduct questions while dealing with confidential material. The Board moved out of confidential session last evening, and we are at that point where, Mr. Callisto, you may call your next witness.

MR. CALLISTO: Your Honor, before we do that, just one administrative issue.

Board Member Wagner yesterday had--I think it was yesterday. I'll just say in the prior part of the hearing. It's starting to merge a little bit in my mind. Board Member Wagner had a question--and I believe it was to Mr. Vognsen, but it could have been to Mr. Michek--asking if he had a five-year look at the impact of the RER, and what we provided was a document that had two years. I'm sorry. It was the Chair.

Overnight we've created that document so that we can provide to the Board a five-year look of the company's view of the impact of the RER.

Mr. Michek can certainly talk about that directionally in public session; but, of course,

```
there are elements of it that would have to be in
1
2
    closed if we're going to walk through the specific
3
    document, but we would like to give the Board the
4
    opportunity to ask questions on that. We assume that
5
    he's going to be a witness again, Mr. Michek.
6
             CHAIRPERSON HUSER: Mr. Michek is going to
7
    be a witness again, so do you wish to call him now
8
    and then bring him back later, or do you want to go
9
    right to Mr. Morin?
10
             MR. CALLISTO: I think we'll go to Dr. Morin,
11
    and then we'll just take it from there.
12
             CHAIRPERSON HUSER: All right.
13
             MR. CALLISTO:
                             Thank you.
14
             CHAIRPERSON HUSER: Are there any other
15
    issues that any party wishes to bring up before we
16
    begin?
17
             MR. LONG: Board Chair.
18
             CHAIRPERSON HUSER:
                                  Mr. Long.
19
             MR. LONG: I just wanted to clarify that the
20
    cross-examination that I will conduct on Dr. Morin
21
    will be in the gas docket, RPU-2019-2.
22
             CHAIRPERSON HUSER: Mr. Callisto?
23
             MR. CALLISTO: IPL calls Dr. Roger Morin.
24
25
```

| 1  | ROGER A. MORIN,                                       |  |  |  |  |  |
|----|---|--|--|--|--|--|
| 2  | called as a witness by Counsel for Interstate Power   |  |  |  |  |  |
| 3  | and Light Company, being first duly sworn by          |  |  |  |  |  |
| 4  | Chairperson Huser, was examined and testified as      |  |  |  |  |  |
| 5  | follows:  |  |  |  |  |  |
| 6  | CHAIRPERSON HUSER: You may be seated.                 |  |  |  |  |  |
| 7  | THE WITNESS: Thank you.                               |  |  |  |  |  |
| 8  | CHAIRPERSON HUSER: Just hold on one second            |  |  |  |  |  |
| 9  | before you begin, Mr. Callisto.                       |  |  |  |  |  |
| 10 | Ms. Tipton, it appears that you may have              |  |  |  |  |  |
| 11 | information related to whether or not Mr. Marcus is   |  |  |  |  |  |
| 12 | in attendance today.                                  |  |  |  |  |  |
| 13 | MS. TIPTON: Yes. He told me that he was               |  |  |  |  |  |
| 14 | going home last night. He was finished.               |  |  |  |  |  |
| 15 | CHAIRPERSON HUSER: Okay.                              |  |  |  |  |  |
| 16 | Mr. Callisto?   |  |  |  |  |  |
| 17 | DIRECT EXAMINATION                                    |  |  |  |  |  |
| 18 | BY MR. CALLISTO:                                      |  |  |  |  |  |
| 19 | Q. Dr. Morin, please state and spell your name        |  |  |  |  |  |
| 20 | and give us your title as well.                       |  |  |  |  |  |
| 21 | A. My name is Roger A. Morin, M-o-r-i-n. My           |  |  |  |  |  |
| 22 | title is emeritus professor of finance and            |  |  |  |  |  |
| 23 | distinguished professor for regulated industry at the |  |  |  |  |  |
| 24 | Robinson College of Business, Georgia State           |  |  |  |  |  |
| 25 | University, University Plaza, Atlanta, Georgia 30303. |  |  |  |  |  |

- CHAIRPERSON HUSER: Mr. Morin, you're going
  to have to pull that mic just a little bit closer.
- THE WITNESS: Yes.
- 4 CHAIRPERSON HUSER: Thank you.
- 5 BY MR. CALLISTO:
- Q. Dr. Morin, I'm first going to ask you about the electric case just to get your testimony in, and then we will turn to the gas case.
- Did you cause to be filed in the electric

  docket, RPU-2019-0001, direct and rebuttal testimony?
- 11 A. Yes, sir.
- Q. And if I asked you the same questions, would you give the same answers?
- 14 A. I would.
- Q. Turning to the gas case, RPU-2019-0002, did you cause to be filed direct and rebuttal testimony in that case?
- 18 A. Yes, sir.
- Q. And if I asked you the same questions, would you give the same answers?
- 21 A. Yes.
- 22 MR. CALLISTO: Dr. Morin is available for 23 cross for the gas case.
- 24 CHAIRPERSON HUSER: Mr. Long.
- MR. LONG: Thank you.

## CROSS-EXAMINATION

2 BY MR. LONG:

1

- Q. Good morning, Dr. Morin.
- 4 A. Good morning, sir.
- 5 MR. LONG: For the record, this cross-
- 6 examination is in the gas case.
- 7 BY MR. LONG:
- Q. Dr. Morin, is it correct that you presented
- 9 results based on DCF analyses in your exhibits--I
- 10 | believe they are labeled Direct Exhibits 1 through
- 11 | 8(G).
- 12 A. Yes. Among other results, yes.
- 13 MR. LONG: Thank you.
- 14 Could we go to Exhibit 3(G), Dr. Morin's
- 15 | Direct Exhibit 3(G) in RPU-2019-0002?
- 16 THE WITNESS: I have it.
- 17 BY MR. LONG:
- 18 Q. Please look at the numbered line 6,
- 19 | South Jersey Industries.
- 20 A. Yes.
- 21 Q. Is it true that the listed ROE for
- 22 | South Jersey Industries is 17.77 percent?
- 23 A. That's correct.
- Q. And isn't it also true that you used this
- 25 ROE from the proxy company South Jersey Industries of

- 17.77 percent to compute your average, which is 9.58 percent?
- 3 A. Yes.

- Q. And the average of 9.58 percent is the result of this DCF analysis, which I believe in your direct testimony you rounded up to 9.6.
- A. Correct, sir.
- Q. Thank you.

So you did not exclude South Jersey Industries when computing this result in this DCF analysis; is that correct?

A. That is correct, because one can certainly make the case that that number is unsustainable in the long run and perhaps should or could be eliminated from the average, and perhaps it works in the reverse as well. The low number, 6.2, should perhaps be eliminated as well.

I was a little reluctant to do that because one of the problems with the gas industry right now is our samples are dwindling. A lot of gas companies are being bought out. Southern Company bought Atlanta Gas Light. Duke Energy bought Piedmont Gas. So basically the sample is becoming awfully small, and that's a bit of a problem. But for reasons of consistency, at least in the gas case, I did present

- the numbers of the gas industry.
- Q. You mentioned potentially removing low numbers. Is it true that in other cases you have removed numbers that you consider to be too low from your DCF analysis?
- A. Yes. But there's a very good reason for removing low numbers that are below the cost of debt. It doesn't make any sense to have the cost of equity less than the cost of debt, so in that case I would do the same thing that FERC does, eliminate the numbers that are less than the cost of debt.
- MR. LONG: I'm going to introduce a document that I want introduced as a hearing exhibit.
- 14 BY MR. LONG:

2

3

4

5

6

7

8

9

10

11

- Q. Dr. Morin, would you agree that this is
  an excerpt of my cross-examination of you in
  Iowa-American's rate case in Docket No. RPU-2016-2
  before the Iowa Utilities Board?
- 19 A. Yes. I have not so fond memories of that, 20 yes.
- Q. I'll try to make it brief.
- Would you please now turn to page 5 of 6
  in my exhibit? In the transcript numbering, it is
  page 111.
  - A. I have it.

Q. So I believe you referred to this earlier. 1 2 You removed SJW Water because it was too low because 3 your screen is if it's lower than the cost of debt, 4 you remove it? 5 Yes, sir, that's correct. 6 Q. Is there any corresponding screen for 7 numbers that are too high? Not really, not formally. One way to do it 8 Α. 9 is to use a statistic known as standard deviation. 10 and any time you have a number that's more than two 11 standard deviations away from the mean, you should 12 think about removing it. But if we want to cut to 13 the chase here, I don't have any problem removing 14 that number. 15 MR. LONG: No further questions. 16 THE WITNESS: Okay. 17 CHAIRPERSON HUSER: Mr. Long, do you wish to 18 move OCA Hearing Exhibit 1 into the record? 19 MR. LONG: Yes, in the gas docket. 20 CHAIRPERSON HUSER: OCA Hearing Exhibit 1 in RPU-19-2, is there any objection? 21 22 (No response.) 23 CHAIRPERSON HUSER: Hearing none, the exhibit is admitted. 24

(Witness excused.)
MR. CARDON: Interstate Power and Light

Thank you.

You may call your next witness.

THE WITNESS:

22

23

24

- 1 calls Ms. Wendi Cigrand.
- 2 CHAIRPERSON HUSER: Ms. Cigrand, would you
- 3 please raise your right hand?
- 4 WENDI CIGRAND,
- 5 called as a witness by Counsel for Interstate Power
- and Light Company, being first duly sworn by 6
- 7 Chairperson Huser, was examined and testified as
- follows: 8

21

23

- CHAIRPERSON HUSER: Mr. Cardon. 9
- 10 DIRECT EXAMINATION
- 11 BY MR. CARDON:
- 12 Q. Ms. Cigrand, will you please state and spell your name for the record? 13
- 14 Wendi Cigrand, W-e-n-d-i, C-i-g-r-a-n-d. Α.
- 15 Q. And what is your position with Alliant Energy?
- I'm the director of customer support 16 Α. 17 services.
- 18 Q. Can you please provide a brief summary of 19 your education and work experience?
- Α. I have a bachelor's degree from Buena Vista University in Storm Lake, and I have been with the 22 utility for 19 years, beginning in billing and mostly concentrated around the customer-facing pieces of the 24 utility, the call center, billing functions.
  - Can you please explain your responsibilities Q.

as director of customer support services?

- A. Yes. I'm responsible for all the customer-facing interactions in the call center on our voice channels, as well as the self-service channels, and ensuring that customer complaints, issues, comments are handled efficiently. We also focus a lot of attention on process improvement.
  - Q. And in what location are you based?
- A. I'm based in Cedar Rapids. My call center manager is based in Cedar Rapids, and the majority of our customer service staff is based in Iowa.
- MR. CARDON: Yesterday the Board indicated it had specific questions for Ms. Cigrand. Rather than try to restate those questions, I'll make Ms. Cigrand available for Board questions.
- CHAIRPERSON HUSER: Is there any party that has any questions for Ms. Cigrand?

(No response.)

CHAIRPERSON HUSER: Ms. Cigrand, we would like it if you would simply start with an overview of the customer service call center and the process in which you handle the complaints that come in and the timelines it takes to answer those calls.

THE WITNESS: Okay. There are a few channels that customer complaints come in. Some are

through the Utilities Board. Those are answered by staff dedicated to the Board staff. They answer an e-mail box and are available by phone, and they are staffed the same hours that the Board staff works, so they can quickly respond to those complaints.

We also get some complaints through our executives. Customers may write a letter or call them directly. Those are handled by that same regulatory complaint staff.

The majority of our complaints come through our customer service center while our associates are talking to customers. They'll file a case in our billing system. It allows them to capture the main topic of their complaint, any subtopic. They can open that case and close it if they were able to resolve the complaint while they had the customer on the phone, or if they need to escalate that to a different department or perhaps someone asked to speak to a supervisor, they can escalate it through our billing system to the party that can respond.

The majority of our internal complaints that come through the call center are closed between 24 and 48 hours after receipt.

CHAIRPERSON HUSER: What is the average call wait time?

1 THE WITNESS: We have been averaging, for a 2 monthly average speed of answer in the call center, 3 90 seconds or less for all of this year. 4 CHAIRPERSON HUSER: You indicate that 5 there are staff assigned specifically to the 6 Utilities Board and then staff that work outside of 7 that category. 8 How many customer service representatives 9 work with the Utilities Board complaints? 10 THE WITNESS: We have three people who 11 answer those complaints and a manager over that 12 group. 13 CHAIRPERSON HUSER: And then the other side? 14 THE WITNESS: There are approximately 143 15 associates answering the phones in Iowa, and there are 31 in Madison. 16 17 CHAIRPERSON HUSER: Do they take calls from both states? 18 19 THE WITNESS: Yes. All of our associates 20 take calls for both states. Those calls are tracked, 21 and there's an affiliated agreement where we can 22 true-up that financial difference from one utility to 23 the other one. 24 CHAIRPERSON HUSER: And I'm not going to 25 The three individuals and the manager assume.

operate where, out of what location? 1 2 THE WITNESS: One is in our Centerville 3 office, one is in Cedar Rapids, one is in Madison, 4 and that manager is in Madison. CHAIRPERSON HUSER: And then the 143 5 6 associates and 31 others, where is their location? 7 THE WITNESS: The 31 are in Madison. 8 you'll have to forgive me. I believe that 9 approximately 70 of the 143 are in Centerville, but 10 the remainder are in Cedar Rapids. It's a fairly 11 even division for Iowa, how many are in Cedar Rapids 12 and how many are in Centerville. 13 CHAIRPERSON HUSER: Are any of the customer 14 service managers or management team in Iowa? 15 THE WITNESS: Yes. We have five team leads 16 and the call center manager over all three managers 17 reside in Iowa, and there is one call center team 18 lead in Madison. CHAIRPERSON HUSER: Is there a different 19 20 average wait time for customers peak versus non-peak? 21 THE WITNESS: It does vary throughout the 22 day depending on the call arrival patterns. 23 also vary if we have an outage. Outage and emergency 24 calls are prioritized first, then the customer

service calls, so that can cause a little bit longer

589 wait time. 1 2 CHAIRPERSON HUSER: For those that are 3 Utilities Board staff versus those that are in the 4 call centers, is the average wait time different? THE WITNESS: That's a good question. 5 6 isn't a measurement on that staff that supports the 7 Utilities Board complaints. They have a general 8 mailbox and then their general phone numbers. 9 Most of those complaints come into a 10 complaints@alliantenergy.com e-mail box. CHAIRPERSON HUSER: You made--or I heard you 11 12 state that the hours of those staff assigned to the 13 Utilities Board are consistent with the hours of the 14 IUB. What are those hours? 15 THE WITNESS: Those are actually probably a 16 little broader. Our first person is in by 7 a.m., 17 and the last one ends no earlier than 5 p.m., and sometimes they stay later. 18 19 CHAIRPERSON HUSER: Are you familiar with 20 any of the testimony that's been filed by Ms. Parker 21 or Mr. Bents? 22 THE WITNESS: I have read Ms. Parker's 23 testimony. I am not familiar with Mr. Bents'.

please call up Mr. Bents' testimony at page 21?

CHAIRPERSON HUSER: Ms. McConnell, would you

24

```
1
    guess go back to page 20, the question that starts on
2
    the bottom of the page.
3
             Could you read the question? You don't
    need--I need you to read it. I want you to be
4
5
    familiar with it.
6
             THE WITNESS: Certainly. "How many
7
    complaints involving IPL are related to billing, high
    bills, or rates/charges, independent of rate case
8
    comments?"
9
10
             CHAIRPERSON HUSER: Would you read the
11
    answer?
12
             THE WITNESS: The majority of them.
13
    2014, 20 out of the 35 (57 percent) complaints
14
    submitted involving IPL had the terms 'billing,'
15
    'high bill,' or 'rates/charges' in the Docket
16
    Description. In 2015, 25 out 39 (64 percent) had
17
    those terms. In 2016, there were 431 out of 442
18
    (98 percent). In 2017, it was 58 out of 83
19
    (70 percent), and in 2018, it was 470 out of 496
20
    (95 percent) complaints. It should be noted that in
21
    2018, the term 'high bill' was specifically
22
    identified in 408 of those complaints."
23
             CHAIRPERSON HUSER: You've previously stated
24
    you are not familiar with Mr. Bents' testimony.
                                                      Do
25
    you know whether this information was provided to
```

anyone in the customer service area?

THE WITNESS: I don't know that this particular information was, but we do pay attention to what the main categories of the complaints are coming in, and that's where we spend some time doing process improvements, communication, perhaps Q and A with the staff on how to better handle those types of calls.

CHAIRPERSON HUSER: So then you are familiar with the situation and the occurrence of the increase in the number of complaints that the Utilities Board has received.

What has IPL implemented as it relates to procedures to address the high percentage of high bill complaints?

THE WITNESS: We have brought our staff back in for more extensive training on high bill, what could perhaps help customers understand their energy usage.

High bill is a little bit difficult in that we don't expect our customers to understand all of the ins and outs of the energy business. That's really our business, and a customer isn't interested in that.

What will be very helpful and what we have

seen in a decline in complaints so far this year is the very low estimation numbers because of the AMI meter implementation. That had caused some fluctuation in bills, and oftentimes they may have been estimated simply because there was a dog in the yard or we couldn't get to the meter. It causes some abnormal swings up and down in customer usage.

What we would like to do as we implement a new My Account solution, which is the self-service portal, an app for our customers, if we are able to share some of that granular AMI data--and I know that that is still under consideration--there are high usage alerts customers can sign up for. They can own how they want to receive that information. They can set a usage threshold for the month, and they can determine whether they want to know at 25 percent, 50 percent, 75 percent of that usage. It will allow them to understand how they're using energy in real time.

CHAIRPERSON HUSER: And when do you expect that My Account to roll out?

THE WITNESS: That will go live by the end of January 2020.

CHAIRPERSON HUSER: And with any training plan, I assume it's starting now, so can you explain

to me what training is being set up to provide to the customers so that they understand how to use and operate the system?

THE WITNESS: Yes. The system is very intuitive. It's being used by several utilities now, the base system that we purchased. And so it's more--I would liken it a little bit more to an Amazon experience where it's very intuitive how a customer would use it.

However, there are opportunities for us to leverage quick how-to videos, how to get registered, how to set up, maybe, auto pay or budget bill.

They'll be able to actually enter into their own payment arrangement online if they want to. They can get bill reminders.

So there will be--we'll use our social media channels, Facebook, things like that, for video snippets. We'll have bill inserts. There will be mailings to customers.

Probably our first challenge is the one-third of our customers that are on our current platform, getting them through the transition to the new platform, so that will be a lot of communication to them about what that means for them, in particular, and what, if any, action they need to

take. 1 2 CHAIRPERSON HUSER: Do you know what 3 percentage of your customers are considered to be low and moderate income? 4 THE WITNESS: I am aware that I believe 5 6 25 percent of our customers have a median wage of 7 25,000 and 15 percent have 50,000 as their income. 8 CHAIRPERSON HUSER: And your testimony 9 seems to indicate that all of this information is 10 going to be available on an online account. Is that 11 accurate? 12 THE WITNESS: Let me make sure I understand. 13 The information that I explained as in--14 CHAIRPERSON HUSER: Is the My Account 15 electronic? 16 THE WITNESS: It is. 17 CHAIRPERSON HUSER: How have you set up the 18 training for those customers that don't have in-home 19 Internet or computer systems? 20 THE WITNESS: It actually works on a smart 21 phone as well. There's a desktop portal. They can 22 leverage that from any mobile device or computer, or 23 they can use their smart phone. We'll always still have our voice channel as 24

well, so they're welcome to call us as well. There's

just a high percentage of our customer base that would like to do self-service. We see that even as we survey our customers. They're more satisfied in the self-service area, so they want that, and they want a few more tools. It won't satisfy every customer's want or need, and so we'll have that voice channel as well.

CHAIRPERSON HUSER: And the training you've identified are videos. I mean are there help lines that are going to be made available for customers, and when is that starting?

THE WITNESS: That marketing plan starts, I want to say, towards the end of next month. It's a little bit--we don't want to say it too far in advance. That's confusing to customers if the tool isn't coming online yet. But we'll also have--we have a dedicated web support thread. As you call in to Alliant Energy, if you say "web support" to our voice recognition system, you'll be channeled to an agent, and that pops up on their screen so they know that's what the question is about.

The other real benefit to our customers in us going live with that in January is that it will lower call volume time for us, typically, and so that allows us a little more dedicated time to ensure that

| 1  | that's a smooth transition.                           |  |  |  |
|----|---|--|--|--|
| 2  | CHAIRPERSON HUSER: Are you aware of the               |  |  |  |
| 3  | percentage of C files, CIs, and verbals that the      |  |  |  |
| 4  | Iowa Utilities Board receives that are related to     |  |  |  |
| 5  | IPL?  |  |  |  |
| 6  | THE WITNESS: Yes.                                     |  |  |  |
| 7  | CHAIRPERSON HUSER: What is that percentage?           |  |  |  |
| 8  | THE WITNESS: As far as your percentage of             |  |  |  |
| 9  | total complaints?                                     |  |  |  |
| 10 | CHAIRPERSON HUSER: Yes.                               |  |  |  |
| 11 | THE WITNESS: I don't know that. I'm sorry.            |  |  |  |
| 12 | I thought you meant of our complaints.                |  |  |  |
| 13 | CHAIRPERSON HUSER: What do you believe the            |  |  |  |
| 14 | percentage is of your complaints?                     |  |  |  |
| 15 | THE WITNESS: In the scope for this year,              |  |  |  |
| 16 | it's fairly low. Most of our complaints come in       |  |  |  |
| 17 | through our call center; however, I am aware that     |  |  |  |
| 18 | there's a lot more work involved in an IUB complaint. |  |  |  |
| 19 | CHAIRPERSON HUSER: And we do not have                 |  |  |  |
| 20 | anyone that's testified to this, but the number that  |  |  |  |
| 21 | I've been provided with is we're ranging between 60   |  |  |  |
| 22 | and 70 percent of all of our customer complaints are  |  |  |  |
| 23 | related to IPL.                                       |  |  |  |
| 24 | Does that surprise you?                               |  |  |  |
| 25 | THE WITNESS: We have a lot going on in the            |  |  |  |

utility, and I think that some of those changes have caused customers to have questions.

What I can say is although there were many complaints about the AMI implementation, now that the majority of those meters are in and we're actually getting the reads from them, internally we had seven complaints last month about AMI, and it was really more customers that wanted to make sure--perhaps they're on the opt-out. They want to make sure they're still on the opt-out, and they are, so we just reassure them.

CHAIRPERSON HUSER: So as we head into the moratorium, the increase in cases seems to be about the process used to handle previous unpaid balances for other persons. What standard or requirement does IPL use to determine when to transfer a bill from one customer's account to another?

THE WITNESS: If you're speaking to maybe the roommate rule, I hope--

CHAIRPERSON HUSER: Say that again.

THE WITNESS: The roommate rule, perhaps.

So if someone lives at a premise and they don't pay their bill and someone else is looking to sign up to put that account in their name, if that person who is now signing up to put that account in their name has

lived there for the duration of all that usage, then they benefited from the service, and so that balance then becomes theirs. They can have a payment arrangement on that balance.

CHAIRPERSON HUSER: Oh, I understand the rule.

THE WITNESS: Okay.

CHAIRPERSON HUSER: My question is, what's the procedure that's used by IPL to determine that?

THE WITNESS: We have a few things that we use. We use a piece of software to help us determine where that individual has been receiving mail or what their last registered mailing address was. That helps us know if that's what's occurring. Typically we don't look into that unless there's quite a significant balance that seems to be at that premise. Sometimes it will happen that there's a lot of people calling in attempting to get service at a certain premise where there is a large balance due.

So there are a few key things that the associate will see and maybe start to instigate a few more of these questions that they ask just to try to determine was that person living here that entire time.

CHAIRPERSON HUSER: What is the software

called?

2 HE WITNESS: It's a LexisNexis product.

CHAIRPERSON HUSER: With the use of the AMI meters, we understand that disconnections will be much easier. It's cutting down on costs. There's been testimony that's been provided throughout the case as it relates to that process.

What standard or requirement does IPL use to determine when to begin that disconnection process?

THE WITNESS: There is a timeline of events that are triggered within our billing system, so the bill is rendered, for instance, day one. On day 20 that bill is due. Four days later the system goes through a due-date processing if payment has not been received. Then it enters into pieces where eventually a 12-day disconnect letter is sent to the customer. Before the actual disconnect happens, there's a phone call placed to the customer.

So if the disconnect should occur, what we're finding is very beneficial for our customers from the AMI implementation is that once they call us and settle that issue, either by entering into a payment arrangement or paying the balance--they have a few options depending on their situation--there is a system job that sends that connect signal to that

1 meter, and that customer is right back on very 2 quickly. That was oftentimes an area where customers 3 would get frustrated when we couldn't guarantee a time that the truck would come to connect their 4 5 service because it depended on where they were 6 located, where our field personnel were located. We 7 couldn't really gauge that for them, where now 8 they're turned on right away. 9 CHAIRPERSON HUSER: As you are aware,

we received numerous calls as it relates to misinformation and miscommunication regarding the opt-out on the rollout of the smart meters.

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

We also have electronically available those conversations that we've had with IPL.

How have you improved your training practices for the call centers related to those problems?

THE WITNESS: We did have a few stumbles with that process. As we were rolling out those meters, some parts of our territory would get the postcard that this was coming, while others it was happening, and there was a little confusion amongst our staff.

When we were alerted to the fact that our customers are getting some misinformation, we took

that very seriously. We pulled the associates aside in groups off the phone to really explain the parts and pieces in the billing system that they needed to look at and what it meant, because there are certain notes on every account that would let them know what stage of implementation they were in.

Once we did that, we monitored it very closely, and I believe for the most part that helped everyone understand exactly what they were looking at and how important it was for those customers who really wanted to be assured that they were on the opt-out.

CHAIRPERSON HUSER: Do you handle the unique complaints differently than you do billing or service complaints?

THE WITNESS: I guess I would say that I try--I think my staff and I look at a complaint as what are the unique situations for that customer. There's different levers that can be pulled, there's different activities that are going on, so it's really rather important to really look at the whole situation for every complaint, because there could be a slight nuance that would help guide you on the right way to respond to that complaint.

CHAIRPERSON HUSER: And you're aware that we

received a large number of complaints during the customer comment meetings that led to us opening C files or other proceedings.

One specific instance--and I think there are four or five others--relates to landowners and wind farms.

How are those treated and how do you address those customer issues when they're related to third-party contracts or providers of service to IPL?

THE WITNESS: We oftentimes get complaints that are a bit outside of our area of expertise, but because we're somewhat the funnel, that's where customers come, and so we work very closely with people in the company who are more close to that information. Sometimes they may take that complaint and speak to that customer directly. Sometimes they may inform us, if it's maybe not quite so technical, how we could help that customer. But we don't really get into a lot of the issues outside our area because that's not really where we're subject-matter experts, but we do take the responsibility of taking care of that complaint to completion very seriously.

CHAIRPERSON HUSER: So whether you have jurisdiction or authority over the particular issue, you try and take care of that customer; correct?

THE WITNESS: Yes. 1 CHAIRPERSON HUSER: The Iowa Utilities Board 2 3 is encountering that same issue where we may not have 4 jurisdiction, but they are IPL customers, and we're 5 trying to figure out how to deal with that. 6 Do you have any suggestions for us? 7 THE WITNESS: I think that would be a good 8 topic for us to sit down and walk through what you're 9 saying, and perhaps that relates to a process we use 10 internally or how we could develop that together. 11 CHAIRPERSON HUSER: Are you aware that there 12 have been situations that have arisen related to the 13 2019 winter interruption of service to interruptible 14 customers? 15 THE WITNESS: Yes. 16 CHAIRPERSON HUSER: What process or 17 procedure did IPL follow to notify a customer of the 18 interruption of service? 19 THE WITNESS: We used the same type of 20 communication plan that we use for every interrupt. 21 I believe that, understandably, our customers were a 22 bit surprised to be interrupted in the wintertime. 23 It's not a normal-type interrupt. CHAIRPERSON HUSER: Do you know how many 24 25 customers were unable to lower their usage to meet

their identified thresholds? 1 THE WITNESS: I do not have that information 2 3 with me, but we do have it. CHAIRPERSON HUSER: What alternatives did a 4 5 customer have if the customer was unable to contact 6 an IPL representative during this time period? 7 THE WITNESS: Well, they should have been 8 able to. Many did, because most of those customers 9 have an assigned key account manager, but they also 10 can contact the call center. They have a line that 11 gives them priority to get to someone that's 12 specifically knowledgeable for interrupts, at least 13 to get them to someone else that can help in a timely 14 manner, because it is a very time-sensitive issue. 15 CHAIRPERSON HUSER: Are your representatives--16 are the three staff--are the staff that are-- Strike 17 that. 18 Are the staff that are assigned to the 19 Utilities Board able to provide the Utilities Board 20 with that key account manager to assist in those 21 situations? 22 THE WITNESS: I don't see why they couldn't. 23 We do that for our customers. I would think they 24 could. 25 CHAIRPERSON HUSER: Is it considered

confidential who that person is that is assigned to 1 2 that customer? 3 THE WITNESS: Not to my knowledge. 4 CHAIRPERSON HUSER: Are you aware of the 5 number of interruptible customers that we've had to 6 open files on? 7 THE WITNESS: I'm aware of three. 8 CHAIRPERSON HUSER: Would it surprise you--9 What do you think that refund amount was? 10 THE WITNESS: In total, the penalties? 11 CHAIRPERSON HUSER: These are the refundable 12 amounts that were paid back to the customer. 13 THE WITNESS: I don't have that off the top 14 of my head, and I would rather not ballpark it, but I 15 could get it for you. There's a few components 16 there, if it's a refund of the penalty or a refund of 17 the new established demand. CHAIRPERSON HUSER: And I've decided not to 18 19 go any further because I don't have the -- I don't know 20 the difference. I just have the total. 21 Do you know, is there statistical 22 information on how common significant billing errors 23 are; for instance, over a thousand dollars on a 24 residential or commercial? 25 THE WITNESS: We do track larger billing

5

6

7

8

9

10

11

16

17

18

19

20

21

22

23

24

25

- adjustments. That is a monthly meeting where there 2 is kind of a deep dive into sort of a five why, if 3 you will, of what caused the issue and allows us to learn from it. 4
  - CHAIRPERSON HUSER: Are you aware that IPL is proposing a Renewable Energy Rider?
    - THE WITNESS: I am a bit aware, but certainly not a subject matter expert.
  - CHAIRPERSON HUSER: Do you know whether or not that's going to be a separate line item on the bill for the customer?
- 12 THE WITNESS: I can't recall.
- 13 CHAIRPERSON HUSER: Are you aware that 14 customers currently find the bills confusing and less 15 than transparent?

THE WITNESS: Absolutely. And I'll tell you, there's a piece in the My Account where they can look at their complete bill. Of course, we provide that. But there's also a recap of just a simplified line item of their usage. That way if they don't care to know every line item on the bill and they would rather just see that quick amount of what was my usage, what was my total, that's available for them, and that is something that has been asked for for years. Utility bills aren't simple to understand

1 for non-utility people. 2 CHAIRPERSON HUSER: With all the technology 3 that we have available and the more transparent that 4 our legislative bodies and others are requesting that 5 we become, do you have ideas on how to make that bill 6 more transparent and explain the components of the 7 utility bill? 8 THE WITNESS: It's difficult to try to 9 explain what those line items are in customer-10 friendly terms, so it's something that we continue to work towards. It just doesn't seem to be very easy. 11 CHAIRPERSON HUSER: Sounds like a good 12 13 strategic plan item, doesn't it? 14 THE WITNESS: It may be. 15 CHAIRPERSON HUSER: Hold on one second. 16 THE WITNESS: Sure. 17 (Pause.) CHAIRPERSON HUSER: Mr. Cardon? 18 19 MR. CARDON: Thank you, Board Chair. 20 REDIRECT EXAMINATION BY MR. CARDON: 21 22 I have just a few follow-up notes that I was 23 hoping you could clarify a few additional things. 24 The Board Chair had asked you a few 25 questions about whether call center employees answer

- calls from both jurisdictions.
- 2 Do you recall that questioning?
  - A. I do.

- Q. Do you provide training to the call center staff to be able to adequately answer questions for both states?
  - A. We do.
- Q. The Board Chair had some questions about the My Account rollout and how it will be available for customers that may not have Internet access, and I believe you indicated that they'll be able to use an app on their phone to get to that information.
- A. Yes.
  - Q. Can you also explain how that works with the voice system to make it easier for customers? How does the My Account work with the voice system that will make it easier for customers to use those systems together?
  - A. Okay. And maybe this is what you're getting to. There are parts and pieces we built into the My Account that we can reuse in our voice recognition system, so it will create more of a likeness between the different channels, whether you're on the app or the desktop or in the voice recognition system, so it will help customers have some continuity in how they

- get what they need transacted with Alliant, and so we're pretty excited to be able to reuse some of that functionality in future endeavors to make our customer service more effortless.
- Q. The Board Chair had you read part of Mr. Bents' testimony about the number of complaints received.

Do you recall that testimony?

A. I do.

- Q. Mr. Bents doesn't state the resolution of those complaints. What was the resolution of those complaints, just in general?
- A. So some of the peak complaint years were in reference to putting in a new billing system, so we are about three-and-a-half years post implementation of a new billing system, which is a major undertaking, so there were a few things that occurred during those years, but those complaints were handled as swiftly as we could, and we took those very seriously.

There are some significant changes in our billing system. One of those changes is to implement some of the collections items in the system, and that's actually what we're going to face to customers on the My Account so that they can use the same path

- that our associates do through that tool, set up their own payment arrangement or sign up for budget or automatic payment. They can do more things on their own.
- Q. And all of these options will make it easier for customers?
- A. Yes. And they're asking for them, and they're getting them with other providers they do business with, so we should do the same.
- Q. Has IPL been reviewing the complaints and comments filed in this rate review and reaching out to customers when appropriate?
- A. We have received some of those files. If the complaint seemed to have an open issue that the customer was still concerned about, we certainly did call them back. Some of those comments were for our commercial/industrial customers where we forwarded those to the key account manager so that they could follow up with the customer.
- Q. The Board Chair had some questions about the AMI capability, and you indicated that as a result of the AMI system, customers can be reconnected more quickly and easily.
- Is IPL also proposing to lower its reconnection charge in this case?

- A. Yes, we are. And in addition to the collections piece, I think it's important to know that if a customer calls in to start service with Alliant and their meter is disconnected, we can connect it seven days a week, every week of the year. So oftentimes in moving, that's a frustration from our customers in the past, of "I had a hundred things to think about. I didn't think about calling you," or perhaps they're serviced by two utilities and they thought they called us, but they didn't, and so that's really a nonissue now as far as the electric meter goes because we can issue that reconnect for a start service immediately.
  - Q. The Board Chair had asked you some questions about unique complaints, and I think the phrase that you used was, you know, that you always look at the levers that can be pulled. By that do you mean you're looking at all the options available to customers?
  - A. Yes. There are many different solutions that we can offer based on the specific situation that that customer is experiencing.
  - Q. And the Board Chair had asked you about some specific situations, and I believe you indicated the roommate rule.

Is IPL being consistent with the way it's addressing those complaints?

A. I believe we are.

Q. The Board Chair had asked you about the winter interruption complaints.

Is IPL following up with some additional process improvements and training to help ensure that customers receive clear communications?

A. We absolutely are. We have now included that in our annual training with those interruptible customers, that that's a possibility and they should be ready for that to happen.

We also did some value screening where we took the entire process from beginning to end and looked for ways to make that clearer, used that customer feedback. If they didn't understand a message that we left for them, how can we reword that message so that it resonates. We've made several changes to the communication templates, and that would be when the call goes out to notify them, what is that verbiage and how is it more clear.

Q. I guess just my last question, the
Board Chair had asked about the Renewable Energy
Rider being a line item on a bill. After the rate
case is over, is IPL going to be providing additional

training to its customer service staff to help answer 1 2 customer questions about the rate case? 3 Α. Absolutely. And typically if there are changes to the bill, we'll have a mocked-up new bill 4 5 format so they can see it, and that also resonates 6 It used to look like this. Now it's going to 7 look like this, and what those parts and pieces mean 8 in customer-friendly terminology. 9 We also have brochures that are called 10 "Understanding Your Bill", and so those would be 11 updated as well, and we could send those to customers 12 or have those available on our web site. 13 MR. CARDON: Thank you, Ms. Cigrand. I 14 don't have any further questions. 15 CHAIRPERSON HUSER: You may step down. THE WITNESS: Thank you. 16 17 (Witness excused.) CHAIRPERSON HUSER: 18 Mr. Callisto, do you have any further witnesses that you wish to call? 19 20 Mr. Vognsen and Mr. Michek will just need to wait. 21 That's fine. MR. CALLISTO: Those are the 22 only two, and I don't have--we can call Mr. Vognsen, 23 because I believe the Board has some questions for him still. 24

CHAIRPERSON HUSER: I think it's in closed

- session, which is why I'm going to put it off, unlessthere is an objection to that.
- 3 Ms. Easler, you may call your first witness.
- 4 MS. EASLER: OCA calls Sheila Parker.
- 5 CHAIRPERSON HUSER: Good morning, Ms. Parker.
- 6 THE WITNESS: Good morning.
- 7 SHEILA J. PARKER,
- 8 called as a witness by Counsel for the Office of
- 9 | Consumer Advocate, being first duly sworn by
- 10 Chairperson Huser, was examined and testified as
- 11 | follows:
- 12 CHAIRPERSON HUSER: You may be seated.
- 13 Ms. Easler.
- 14 DIRECT EXAMINATION
- 15 BY MS. EASLER:
- Q. Please state your name and place of employment for the record.
- A. My name is Sheila Parker. I'm employed by
  the Office of Consumer Advocate.
- Q. And what position do you hold with the OCA?
- 21 A. I'm a utilities specialist.
- Q. Did you cause to be filed direct and rebuttal testimony and exhibits in this proceeding?
- 24 A. Yes.
- Q. Do you have any corrections to make to this

prefiled testimony?

- A. Consistent with the settlement, we were withdrawing our testimony regarding a subsequent proceeding, so I do have three references in my testimony that I would like to identify.
- Q. Okay. Maybe for understanding, I would reference the settlement agreement, Article XVII, on page 22.
- Ms. Parker, could you walk us through the portions of your testimony that you think are affected by that term?
- A. Yes. I'll start with my direct testimony, page 25, on line 20, beginning with "The Board..."

  And it continues to page 26, the end of line 2.
- The next reference is in my direct testimony on page 35, beginning on line 19, the sentence that begins with "Thus..." and continues to line 20, "review process."
- Then I would move to my rebuttal testimony, at page 18, the sentence that begins on line 17, "The importance..." And it ends on line 19.
  - That completes that withdrawal.
- Q. Thank you.
  - If asked the same questions as posed in your prefiled testimony today, would your answers be the

```
616
    same?
1
2
             Yes.
        Α.
3
              MS. EASLER: This witness is available for
    cross-examination.
4
5
              CHAIRPERSON HUSER: Are there any parties
6
    that wish to cross-examine Ms. Parker?
7
              (No response.)
              CHAIRPERSON HUSER: Board Member Lozier?
8
              BOARD MEMBER LOZIER:
9
                                    No.
10
              CHAIRPERSON HUSER: Ms. Parker, Mr. Brummond
11
    in his testimony referred to some of your testimony.
12
              Are you familiar with Mr. Brummond's
13
    testimony?
14
              THE WITNESS: Yes.
15
             CHAIRPERSON HUSER: Do you believe that--
16
    Are you familiar with his testimony on the energy
17
    efficiency legislation and the reference to how those
    funds would come back to customers?
18
19
              THE WITNESS:
                            In general, yes.
20
              CHAIRPERSON HUSER: In your opinion, what
    was the legislature's intent with the reduction of
21
22
    the energy efficiency clause?
23
              THE WITNESS: Could we go ahead and pull up
24
    the section of his testimony so I can get it in
```

context, please?

CHAIRPERSON HUSER: Ms. McConnell, go down--1 2 I'll just find it. Keep going. 3 MR. CALLISTO: Your Honor, we believe it may be page 12, if I understand what you're asking for. 4 5 CHAIRPERSON HUSER: I appreciate the 6 assistance. I'm trying to pull it up on EFS right 7 now. Go down a little bit further, Ms. McConnell. 8 9 So my understanding of your testimony is 10 that you were trying to set out that the energy 11 efficiency reductions are being used by IPL to reduce 12 the amount of increase that would be proposed in this 13 rate case. Is that a correct interpretation of your 14 testimony? And if not, tell me what your intent was. 15 THE WITNESS: In my testimony I discuss the 16 rider impacts, specifically the Energy Efficiency 17 I recognize that the energy efficiency costs 18 in 2020 will be less than they are in 2018 due to the 19 new five-year energy efficiency plan. 20 Initially customers would have seen, but for 21 the rate case, a reduction in energy efficiency costs 22 and a reduction in the energy efficiency rider. 23 CHAIRPERSON HUSER: Do you have any idea 24 what percentage reduction customers would have seen 25 from the changes the legislature made?

THE WITNESS: I didn't do the calculation 1 for a percentage impact, but as we can see in the 2 3 testimony that's on the screen, it was \$180 million 4 over five years. CHAIRPERSON HUSER: And are the customers 5 6 receiving a reduction in their bill? 7 THE WITNESS: Yes. The energy efficiency 8 costs will be lower than they were in 2018. CHAIRPERSON HUSER: But will the customers 9 10 see a reduction in their bill from the change that 11 the legislature made? 12 THE WITNESS: Yes. There will be a line 13 item on their bill, and the energy efficiency cost will be less. 14 15 CHAIRPERSON HUSER: And the overall customer 16 rate will decrease? 17 THE WITNESS: The Energy Efficiency Rider 18 will decrease, but the base rates are separate from 19 the Energy Efficiency Rider. 20 CHAIRPERSON HUSER: Ms. Easler, I have no further questions. 21 22 MS. EASLER: Thank you. REDIRECT EXAMINATION 23 BY MS. EASLER: 24 25 Ms. Parker, in your direct testimony at Q.

- page 14, I believe you're addressing the \$180 million reduction that Mr. Brummond points out.
  - A. Yes.

- Q. Could you explain the concern you're raising there?
- A. Essentially, it was what I was trying to explain to Board Member Huser, that customers--the energy efficiency spending in the new five-year plan as a result of the recent legislation has decreased. Coming on the hills of the rate increase and information that was given to customers that they would be seeing a reduction in their bills, it's masked by the current proceeding with the rate increase, though absent the filing of the rate case, though, right now, the customers would have seen a reduction in their bill due to the decreased energy efficiency spending.
  - Q. And was that information about those impacts communicated as part of the overall bill impact in this rate case?
  - A. The customer notice just--the base rates and then I believe IPL's customers received additional information from IPL that included the riders, not only the energy efficiency, but the riders that are in the section of my testimony beginning at page 12

| 1  | through 16.   |
|----|---|
| 2  | MS. EASLER: Thank you. That's all I have.           |
| 3  | CHAIRPERSON HUSER: Board Member Wagner?             |
| 4  | BOARD MEMBER WAGNER: Ms. Parker, you just           |
| 5  | mentioned that without this proceeding, this rate   |
| 6  | increase, customers would have seen a decrease in   |
| 7  | their overall bill.                                 |
| 8  | THE WITNESS: Due to the reduction in the            |
| 9  | energy efficiency, correct.                         |
| 10 | BOARD MEMBER WAGNER: Every customer, no             |
| 11 | matter what? What if a customer used more energy    |
| 12 | than they did previously, would they see a decrease |
| 13 | in their bill?                                      |
| 14 | THE WITNESS: If I can clarify, a reduction          |
| 15 | in their energy efficiency aspect of their bill.    |
| 16 | BOARD MEMBER WAGNER: Okay. So just the              |
| 17 | EECR?   |
| 18 | THE WITNESS: That's what I'm talking about          |
| 19 | here, yes.  |
| 20 | BOARD MEMBER WAGNER: Okay. Not the overall          |
| 21 | bill. I just want to clarify that. I thought that's |
| 22 | what you meant, and then I heard you say overall    |
| 23 | bill.   |
| 24 | Okay. Thank you.                                    |
| 25 | CHAIRPERSON HUSER: Ms. Parker, you may step         |

1 down.

5

2 (Witness excused.)

MS. EASLER: Ms. Easler, you may call your

4 | next witness.

MS. EASLER: OCA calls Blake Kruger.

6 BLAKE J. KRUGER,

7 | called as a witness by Counsel for the Office of

8 | Consumer Advocate, being first duly sworn by

9 Chairperson Huser, was examined and testified as

10 | follows:

11 CHAIRPERSON HUSER: You may be seated.

12 Ms. Easler.

13 DIRECT EXAMINATION

14 BY MS. EASLER:

- Q. Please state your name and place of employment for the record.
- 17 A. My name is Blake Kruger. I work for the 18 Office of Consumer Advocate.
- Q. Did you cause to be filed direct andrebuttal testimony and exhibits in this proceeding?
- 21 A. I did.
- Q. Do you have any corrections or additions to make to this prefiled testimony?
- 24 A. No.

25

Q. If asked the same questions as posed in your

prefiled testimony today, would your answers be the 1 2 same? 3 Α. Yes. 4 MS. EASLER: Mr. Kruger is available for 5 cross-examination. 6 BOARD MEMBER LOZIER: Mr. Kruger, you're 7 familiar, no doubt, with the Board's rules with 8 respect to settlements. 9 THE WITNESS: Yes. 10 BOARD MEMBER LOZIER: Specifically, 11 199, Iowa Administrative Code, 7.18, provides that 12 the Board will not approve a settlement unless it's 13 reasonable in light of the whole record, consistent 14 with law, and in the public interest, and I would 15 like to take those three elements one at a time. 16 Would you explain to us how the proposed 17 settlement is reasonable in light of the whole record? 18 19 THE WITNESS: How the settlement is 20 reasonable in light of the whole record? 21 BOARD MEMBER LOZIER: Yes. 22 THE WITNESS: I think the settlement was a 23 process that OCA engaged in with other parties--or 24 IPL engaged in with OCA and other settling parties

and went through an extensive process, going through

the various issues that were in this case over a period of weeks, and met with a compromise on certain issues, and OCA and the other parties all agreed that the issues were resolved through this compromise.

BOARD MEMBER LOZIER: The part that interests me about the rule is the part that refers to the whole record. Are there parts of the record that were not considered in reaching this settlement?

THE WITNESS: I believe that there were certain issues in this case that are still to be worked out in this hearing. Those include some certain rate design aspects. But as far as the revenue requirement, we found compromise on the revenue requirement and filed the settlement regarding the overall revenue requirement in this case.

BOARD MEMBER LOZIER: And going to the next element, can you tell me how the settlement is consistent with law?

THE WITNESS: I'm not an attorney, but it's my understanding that the attorneys present throughout the settlement process all adhered to the law, and the settlement was consistent with the law.

BOARD MEMBER LOZIER: And the final element is that the settlement must be in the public interest.

1 You've talked about a compromise among the 2 parties on various aspects of the settlement, 3 including the revenue requirement. 4 Can you tell me how that compromise aligns 5 with the public interest? 6 THE WITNESS: Sure. The Office of Consumer 7 Advocate represents all consumers, and throughout the settlement process, the Office of Consumer Advocate 8 9 raised different issues, and throughout that process 10 we felt like the settlement met the customers' 11 interests and served the public and served the best 12 interest of customers through the revenue requirement 13 that we had determined through the settlement. 14 BOARD MEMBER LOZIER: Did you ever attend 15 any of the customer comment meetings that we held 16 across the state? 17 THE WITNESS: I did. 18 BOARD MEMBER LOZIER: And did you hear 19 comments from people how the proposed increase in 20 their rates would have an adverse effect on them? 21 THE WITNESS: I did. 22 BOARD MEMBER LOZIER: And did you give 23 consideration to those comments? THE WITNESS: I think we absolutely did. 24 25 BOARD MEMBER LOZIER: As I recall, there

| 1  | were comments from low-income people.                 |
|----|---|
| 2  | Do you recall that?                                   |
| 3  | THE WITNESS: Yes.                                     |
| 4  | BOARD MEMBER LOZIER: And a number of people           |
| 5  | said that they would have trouble deciding whether to |
| 6  | pay their utility bill or purchase food for their     |
| 7  | children.   |
| 8  | Do you recall those comments?                         |
| 9  | THE WITNESS: Yes.                                     |
| 10 | BOARD MEMBER LOZIER: And other comments               |
| 11 | from large industrial users to the effect that it     |
| 12 | would have a serious adverse effect on their bottom   |
| 13 | line.   |
| 14 | Do you recall those?                                  |
| 15 | THE WITNESS: I do.                                    |
| 16 | BOARD MEMBER LOZIER: And do you recall the            |
| 17 | comments from the Decorah Area Group how it would     |
| 18 | have an adverse effect on Luther College and the      |
| 19 | entire community?                                     |
| 20 | THE WITNESS: I was not at the Decorah                 |
| 21 | meeting, but I heard the representations of the       |
| 22 | Decorah witnesses in this case.                       |
| 23 | BOARD MEMBER LOZIER: In reaching the                  |
| 24 | settlement did you consider all of those comments?    |
| 25 | THE WITNESS: We did.                                  |

| 1  | BOARD MEMBER LOZIER: And you believe the              |
|----|---|
| 2  | settlement is in the public interest; correct?        |
| 3  | THE WITNESS: We do.                                   |
| 4  | BOARD MEMBER LOZIER: Thank you. I have                |
| 5  | nothing further.                                      |
| 6  | CHAIRPERSON HUSER: Mr. Kruger, have you               |
| 7  | heard in the testimony previously provided the        |
| 8  | question that I've asked in relationship to the       |
| 9  | UIPlanner and your testimony on transparency?         |
| 10 | THE WITNESS: Yes.                                     |
| 11 | CHAIRPERSON HUSER: And I had some                     |
| 12 | difficulty in getting a response on the transparency  |
| 13 | provisions for the UIPlanner. I would like you to     |
| 14 | restate for me why you believe that the UIPlanner     |
| 15 | would provide additional transparency for customers.  |
| 16 | THE WITNESS: I would point to pageI                   |
| 17 | believe it's 21 or 22 of my rebuttal testimony.       |
| 18 | Page 21or 22 through 24 are, I believe, the page      |
| 19 | numbers in which I address this concern.              |
| 20 | CHAIRPERSON HUSER: Page 24, if you go to              |
| 21 | 24, line 4.   |
| 22 | THE WITNESS: Page 24, and really the                  |
| 23 | prelude are really the two pages previous to that.    |
| 24 | One of the biggest challenges that OCA had            |
| 25 | in reviewing this case was IPL's use of the UIPlanner |

and particularly their use of manual adjustment. I think on page 22--or 23 I highlight some of the larger manual adjustments that IPL had utilized in coming up with its own 0 and M forecast.

OCA sought additional support for some of the increases in O and M expenses, and OCA Witness Helmuth Schultz testified to that difficulty in terms of what OCA viewed as support and what IPL identified as support.

Throughout that process the UIPlanner
Regulatory Module--and that's what I allude to on
page 24 of my testimony. That information that I
have on page 24 shows that--and this is all
information that's copied from and attributed to the
Utilities International web site, and that's
footnoted at the bottom of the page there.

Those things specify that the UIPlanner
Regulatory Module produces more accurate and
auditable regulatory results. What I mean by that is
the difficulty that we had with the UIPlanner in
terms of IPL is that IPL forecasts it in terms of
GAAP accounting and not FERC accounting, and we set
rate base on FERC account numbers, and so what the
UIPlanner and Mr. Fields' testimony describes is they
have to run through kind of what they call a FERC

spin process, and after they do the FERC spin

process, they have to run through a number of other

adjustments, one of which are called manual

adjustments that rely upon analyst's judgment to make

those adjustments.

I don't know that the Regulatory Module

I don't know that the Regulatory Module completely eliminates the manual adjustments, but based on our understanding of the Regulatory Module, it would be much more consistent and provide more accurate and auditable results, and it would also be a lot more transparent than the process that we dealt with in this case.

CHAIRPERSON HUSER: And in your opinion, what needs to happen in order for that transparency to occur?

THE WITNESS: The transparency to occur through the Regulatory Module?

CHAIRPERSON HUSER: Correct.

THE WITNESS: I think the Regulatory Module would be a good first step, or at least getting further detail related to the Regulatory Module. OCA sought information related to the cost impact of it. We were unable to obtain that information from IPL.

Really, we would like to take the next step in understanding the Regulatory Module to see if

there would be a better fit for providing that increased transparency as the Utilities International web site attributes.

CHAIRPERSON HUSER: And why were you unable to obtain that information from IPL?

THE WITNESS: IPL said that they didn't have that cost information. We sought this through numerous data requests.

CHAIRPERSON HUSER: And the Regulatory

Module that you're discussing, do you believe that
will allow more transparency for OCA, more

transparency for information that the IUB receives,
and more transparency for legislative inquiries
related to billing assumptions?

THE WITNESS: Especially the first two. I can't speak to the legislative billing assumptions, but I think for the first two it would be much more transparent in terms of--especially if the UIPlanner Regulatory Module would forecast in FERC accounting, then we could have more auditable results where we could have--especially if the forecasts are more auditable where the FERC account numbers line up with the annual report information that's reported by IPL, we could have a direct comparison of how the forecast lines up with actual results for that year. It would

give us more confidence in trusting the forecast. 1 2 CHAIRPERSON HUSER: And throughout your 3 testimony, but on page 13 of your rebuttal, you 4 discuss the new future test year law and the 5 determination of IPL whether to charge customers for 6 assets that are not in service and considered used 7 and useful. Has that issue been resolved in the 8 settlement? 9 10 THE WITNESS: In the settlement we are using 11 a 13-month average test year. I believe the used and 12 useful standard within the 13-month average is that 13 the asset must be used and useful within that year. 14 We are not adhering to the Phase I or Phase II 15 approach within the settlement. 16 CHAIRPERSON HUSER: Are there any unsettled 17 issues where this issue may come up? 18 THE WITNESS: Unsettled issues where the 19 issue of the Phase I/Phase II may come up? 20 CHAIRPERSON HUSER: Yes. 21 THE WITNESS: As far as this proceeding 22 goes, it's my understanding that the 13-month average 23 rate base approach is what we've settled upon using 24 in this case. 25 CHAIRPERSON HUSER: Ms. Easler?

MR. CALLISTO: Your Honor, I do have one or 1 2 two follow-up questions. 3 CHAIRPERSON HUSER: Mr. Callisto. MR. CALLISTO: 4 Thank you. CROSS-EXAMINATION 5 BY MR. CALLISTO: 6 7 Q. Mr. Kruger, in response to a question from Board Member Lozier about the Board's rules on 8 9 accepting a settlement, I just want to make sure we 10 we're clear. 11 It's accurate that OCA looked at the whole 12 record in reaching its position in support of the 13 settlement on the settled issues? 14 Α. On the settled issues, yes. 15 And on UIPlanner, are you prepared to say Q. 16 that OCA would support any expenditure of costs by 17 IPL to get the Regulatory Module from UIPlanner? 18 I think the cost aspect of the Regulatory 19 Module should be a cost that -- at least a portion of 20 it should be shared by IPL. If IPL chose a future 21 test year, the burden of proving its expenses is on 22 IPL, and the expenditures should either be borne by

MR. CALLISTO: No further questions.

IPL or borne as part of a rate-case expense for a

future-test-year case, which would be amortized.

23

24

BOARD MEMBER WAGNER: I do have a question 1 2 on that, Mr. Kruger. 3 With respect to rate-case expenses, can you point to any other expenses that a utility has 4 5 expected its shareholders to cover for a rate case? 6 THE WITNESS: I'm not following you. 7 sorry. BOARD MEMBER WAGNER: So you said the cost 8 9 of the Regulatory Module should be partially borne by 10 IPL because they are the ones asking for a rate 11 increase and they are the ones bringing forth a rate 12 case. 13 Are there any other expenses that you can 14 point to that the utility is required to pay for that 15 they do not get recovery of regarding a rate case? 16 THE WITNESS: I can't think of any off the 17 top of my head, but for clarity, rate-case expenses 18 are amortized, and I believe in the past few years 19 they have gone through a rider mechanism, and those 20 have been amortized over three years. So, for 21 instance, the rate-case expenses in this case would 22 go through a three-year rider mechanism. 23 BOARD MEMBER WAGNER: Correct. 24 THE WITNESS: And the ratepayers would pay 25 for that.

As far as do shareholders pay for certain aspects of prepping for a rate case, there may be certain aspects of that, but I can't speak with clarity on that right now.

BOARD MEMBER WAGNER: Okay. Thank you.

CHAIRPERSON HUSER: Ms. Easler, hold on.

Mr. Kruger, you're aware that all the testimony for subsequent proceeding has been withdrawn?

THE WITNESS: Yes.

CHAIRPERSON HUSER: Do you have or are you willing to express an opinion related to what that subsequent proceeding looks like, even though all of the testimony has been withdrawn?

THE WITNESS: I was not really the witness that testified on the subsequent proceeding. Really, the only thing I have as far as the subsequent proceeding goes is a certification process for rate base, meaning that a rate base that goes into service in 2020 that customers are paying for, to make sure they go in service in 2020 and customers are not paying for something that is supposed to go in service in 2020 and the company is saying, "Well, we're going to push this off until 2021 or 2022, but we already put those in our customer rates."

So the certification process that I 1 2 mentioned in my testimony would ensure that customers 3 are only paying for assets that truly only go into 4 service and are used and useful and providing 5 benefits to customers. 6 CHAIRPERSON HUSER: And Board Member Wagner 7 asked you about whether the utility below the line should be paying for it. So set that aside. 8 9 The UIPlanner is meant to streamline, make 10 things more transparent, more efficient. That's how 11 I've interpreted your testimony. 12 THE WITNESS: That's right. 13 CHAIRPERSON HUSER: And avoid some of the 14 data requests and other criteria that we're currently 15 having to go through as we determine how to do a 16 future test year in Iowa. 17 THE WITNESS: Correct. 18 CHAIRPERSON HUSER: Do you have a position 19 on how it's paid for beyond the fact that you believe 20 it will be more efficient and more effective in Iowa? 21 Strike that. You don't have to answer that. Ms. Easler? 22 23 REDIRECT EXAMINATION BY MS. EASLER: 24 25 Mr. Kruger, I just want to follow up with Q.

you a bit on the questions you received from Board Member Lozier.

Do you think the settled revenue requirement will achieve just and reasonable rates in relation to IPL's \$203 million rate increase request in this case?

A. I do.

- Q. Are there any particular provisions in the settlement that you would want to identify in support of that?
- A. I do. One of the biggest pieces throughout the settlement and probably the largest piece of the settlement that OCA considers that really benefits ratepayers is the assurance of the PTC carryforward issue. The PTC carryforward issue was probably OCA's No. 1 issue in this case, and achieving or seeing a 5 percent return on the PTC carryforwards was much closer to OCA's position, and I believe it was IPL's Witness Michek who testified that it has the impact of lowering that PTC carryforward balance throughout the life of these PTC carryforwards, as expected by IPL, by 35 percent, and that's 35 percent compared to the total--
  - Q. That may get into confidential.
  - A. I was just going to reference a page number

- in my testimony where that number exists. Thank you.

  I believe it's on--the number exists on page 47 of my

  rebuttal testimony, which is a confidential number,

  but it is a large figure, and that really represents

  enhanced protections for customers.
  - There are also other enhanced protections for customers related to stakeholder involvement.

    There are some distribution and grid modernization aspects that involve stakeholder involvement and a lookback of the prudence of these investments.
  - So there are a number of customer benefits and enhancements that this settlement provides that ensure that customers are getting the full benefit of that \$127 million, and OCA believes that this settlement is consistent with the public good, it is consistent with consumers getting the benefit of this, and we feel that it is a good settlement.
  - BOARD MEMBER LOZIER: Mr. Kruger, you're familiar, no doubt, with the regulatory principle that elements that are placed in service must be used and useful.

Thank you. That's all I have.

THE WITNESS: Yes.

MS. EASLER:

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

BOARD MEMBER LOZIER: We've heard testimony
in this case that IPL is not able to use its

production tax credits currently; correct? 1 That's correct. 2 THE WITNESS: 3 BOARD MEMBER LOZIER: So how is a production 4 tax credit used and useful when they can't use it? THE WITNESS: I think the difference there 5 6 is that IPL is providing the benefit of the 7 production tax credits. They're paying that money to 8 customers as they earn it, and the proposed mechanism 9 for that is through the Renewable Energy Rider in 10 this case. So as IPL is earning it, even though they 11 can't use it, they are paying that to customers, 12 but not expecting to receive that money from the 13 Federal Government until they're out of this net 14 operating loss position. 15 So for the fact that they are paying that to 16 customers and they're providing them the benefit 17 right now, I think that is probably the best example 18 of how it is used and useful in this case. 19 For the testimony that IPL and OCA presented 20 on behalf of OCA Witness Schultz, and also 21 accompanied by myself in my testimony, for the tax 22 planning strategies and for a number of other 23 reasons, we determined that a lower rate of return is 24 more appropriate than the full equity return for this

case, and that is why the settlement agreed upon a

5 percent return as opposed to what IPL was asking 1 2 for, which I believe was 9.8 in this case. 3 BOARD MEMBER LOZIER: Thank you. 4 CHAIRPERSON HUSER: Ms. Easler, anything 5 further? 6 MS. EASLER: Nothing further. 7 CHAIRPERSON HUSER: The witness may step down. 8 9 (Witness excused.) 10 CHAIRPERSON HUSER: You may call your next 11 witness. 12 MR. LONG: OCA calls as its next witness 13 Marcos Munoz. 14 MARCOS MUNOZ, 15 called as a witness by Counsel for the Office of 16 Consumer Advocate, being first duly sworn by Chairperson Huser, was examined and testified as 17 18 follows: CHAIRPERSON HUSER: You may be seated. 19 20 Mr. Long. 21 MR. LONG: Thank you. DIRECT EXAMINATION 22 23 BY MR. LONG: 24 Q. Mr. Munoz, did you file or cause to be filed

rebuttal testimony on September 10th and direct

- 639 testimony on August 1st in this case, including 1 2 schedules and workpapers? 3 Yes, I did. Α. Q. Do you have any corrections or changes? 4 Α. I do not. 5 6 MR. LONG: Okay. With that, Mr. Munoz is 7 available for questions. MR. CALLISTO: Your Honor, IPL has been 8 9 listed as having cross, but we withdraw our cross. 10 BOARD MEMBER WAGNER: Mr. Munoz, were you 11 here this morning for Dr. Morin's testimony? 12 THE WITNESS: I was, yes, sir. 13 BOARD MEMBER WAGNER: And you heard him 14 mention that in the gas industry, the pool of proxy 15 companies has been shrinking. 16 Do you agree with that? 17 THE WITNESS: Not necessarily. Compared to 18 what? Where it used to be or what it should be or 19 compared to the other electric utilities? I'm not
  - THE WITNESS: Not necessarily. Compared to what? Where it used to be or what it should be or compared to the other electric utilities? I'm not sure. Maybe more specifically, the list of gas companies that have been--there's been some consolidation in the gas industry.

21

22

23

24

25

The problem with the gas proxy, generally speaking, is that it composes a mix of gas exploration holding entities and a lot of operating

subsidiaries that aren't utilities, so it's a broader mix, and some of the consolidated holding companies have bought a lot of the smaller gas systems or distribution systems, and that's why you see a more narrow focus, a more narrowing of the amount of gas utilities, but it's never been that big to begin with.

I don't necessarily really know what exactly a good amount of gas companies really is, so I wouldn't be able to say that it is smaller. Smaller compared to what, No. 1, and it has a fair amount to get reasonably accurate estimates, if you want to.

I tend to not put a lot of weight, personally, on the gas proxy because I don't think it's representative of the amount of utilities that we have here, specifically IPL in this case. I do use it, but I don't put a lot of reliance on the gas proxy group in the same manner that some other witnesses usually do.

BOARD MEMBER WAGNER: In your testimony you've argued that the Board should use a DCF model, primarily. Is that on the electric side, not the gas side, then? At least based on what you've said here, you said there is a problem with the gas because of the exploration and the other things that you've

mentioned, so in a gas case, should the Board and commissions in general be putting less emphasis on the DCF model?

THE WITNESS: Not on the DCF itself, but just on the reliance of the--

BOARD MEMBER WAGNER: Not necessarily-Okay. So let me rephrase. The results that are
obtained from using the DCF model, should those
results bear less weight given conditions mentioned
by both Dr. Morin and now you with the addition of
those exploration side, and that?

THE WITNESS: Yeah. I would generally agree that, yes, not on the DCF, but probably less reliance on the gas--when you're looking at a combination utility like IPL, probably a little less reliance on the gas proxy results and probably more reliance on the combination proxy results because IPL is a combination utility that has both gas and electric operations, so the broader scope of risk encompassed in the combination utility is probably more appropriate and reasonable for a company like IPL.

If we're talking about Black Hills or
Liberty, or something like that, maybe a little more
emphasis on the gas, but again, those problems will
still arise with the sample size and the proxy

companies themselves.

BOARD MEMBER WAGNER: What would you say, in general, in using the DCF as an appropriate proxy size?

THE WITNESS: That's a good question. I don't have a specific answer for that. You know, the sample of fitness in statistics is usually they say anything more than 30, but we have a utility--you know, the amount of consolidations in the electric industry that is shrinking over time.

I remember when I started working in 2010 at the OCA, my ex-co-worker used to make me go make copies of the Value Lines, and I remember there were 54 or 65, something in that range--I think over 60 electric utilities in Value Line, and now that number is shrinking, and we're down to 42, I want to say, or 38, something like that. I can't really recall the exact number. So that pool is shrinking over time.

You know, it's really hard to say that, you know, anything over 30--when you're dealing with sample sizes of 15, 14, 10, I mean what we call the sample statistical degrees of freedom is not going to create a lot of statistical unreliability on the results that you will have to disregard them, essentially. I think that you're going to have some

- fair fitness in distribution and get some accurate results by just relying on your average, if you're looking at reasonable risk comparisons between the companies.
- So if there's some similarities and you're calculating the risk appropriately, which that's what I did, you will get accurate results--more accurate results by relying on the average. You won't be very inaccurate between comparing 15 to 10 or comparing 17 to 11 or 12.
- 11 I don't know if that got to your answer.
- 12 | That's a pretty long way.
- 13 BOARD MEMBER WAGNER: It did. Thank you.
- 14 CHAIRPERSON HUSER: The Board will take a
- 15 | 15-minute recess.

2

3

4

5

6

7

8

9

- 16 (Short recess.)
- 17 CHAIRPERSON HUSER: Mr. Munoz, you know
  18 that you were previously sworn in before we went to
  19 recess.
- 20 THE WITNESS: Yes.
- CHAIRPERSON HUSER: Board Member Wagner and
- 22 | I are going to switch back and forth for a minute.
- THE WITNESS: Do you mind if I test it? Is
- 24 it working? I don't think it's working, the
- 25 | microphone.

It's working now. Sorry. 1 2 CHAIRPERSON HUSER: There we go. The music 3 was working great this morning; right? 4 THE WITNESS: Was it Cranberries, or 5 something? I can't remember what was playing. Ιt 6 was rock-out music. 7 CHAIRPERSON HUSER: Do you have any concerns 8 remaining on the impact of the RTS tariff and on that 9 metering or distributed generation? 10 THE WITNESS: Yeah. I think that was one of 11 the issues that was not settled, was our concerns--my 12 concern specifically that I listed in my rebuttal 13 testimony that I believe that any potential impact of 14 the RTS on net metering needs to be part of the 15 broader net metering docket, because it needs to 16 consider all the impacts that it will have on the net 17 metering policy in Iowa. 18 It is an added cost, essentially, that we're 19 burdening customers with by, you know, requiring them 20 to pay transmission rates and not taking a holistic 21 approach and determining if we need to reflect 22 avoided transmission costs as part of the benefits of 23 net metering. 24 CHAIRPERSON HUSER: Thank you. 25 BOARD MEMBER WAGNER: Is it your contention

that all transmission costs are burdening customers? 1 2 THE WITNESS: No. 3 BOARD MEMBER WAGNER: Just solar or anybody 4 who has got a net metering arrangement? 5 THE WITNESS: It depends on whose 6 transmission costs. It is a part of cost of service, 7 but I think my position is that it needs to be part 8 of the broader review of net metering policy, because 9 as I heard testimony yesterday, not all the energy 10 produced through back-of-the-meter generation goes 11 back into the transmission system. Some of it stays 12 within the distribution system. That was Mr. Nielsen's 13 testimony. 14 So there's a benefit associated with net 15 metering deployment to the whole grid, and that needs 16 to be part of the holistic review, so it's not that 17 the transmission cost is a burden or it isn't. 18 that we need to evaluate in totality the impact it 19 will have on net metering and the net metering policy 20 in the state. 21 BOARD MEMBER WAGNER: So is the impact of 22 transmission costs a net metering issue or is it an 23 overall customer issue that needs to be looked at? 24 THE WITNESS: Well, it's an overall customer

issue, but I think specifically the issue that I

testified on the modification of the net metering 1 2 pilot tariff to--or the RTS rider, excuse me, to 3 apply to all kilowatt-hours delivered to all customers, with the exception of net metering, yes, 4 5 this is part of the overall cost of service, but 6 there are holistic benefits associated with net 7 metering deployment, and the transmission cost 8 impacts need to be part of that totality evaluation. 9 We didn't set net metering rates or net 10 metering policy in the context of a rate proceeding. 11 We did it through a separate docket proceeding. 12 think a different docket proceeding is more 13 appropriate to address the impact of transmission 14 services on net metering. 15 BOARD MEMBER WAGNER: You mentioned paying 16 transmission costs on generation. Do net metering 17 customers pay based on what they generate or what 18 they are using from the utility? 19 THE WITNESS: I think customers pay on the 20 net of service provided. 21 Currently today? BOARD MEMBER WAGNER: 22 THE WITNESS: Yes. 23 BOARD MEMBER WAGNER: And under the tariff 24 change--or under this change, would they pay for

everything they generate and everything they use?

THE WITNESS: I believe the proposal is to pay only on the kilowatt-hours delivered through the transmission system into the distribution system that are delivered to those customers. In essence, it is to all customers, which will include net metering customers.

BOARD MEMBER WAGNER: So in the case where a customer net meters their bill to zero--or their usage to zero, does that mean they never used the transmission or distribution grid?

THE WITNESS: No. It isn't that they never used it; but, again, it's not necessarily the cost impact of transmission services. It's that it needs to be part of a broader discussion of benefits and costs, not just costs in isolation. That's essentially my overall position.

BOARD MEMBER WAGNER: Well, isn't this a case where we're looking at broader overall costs?

THE WITNESS: Yes, but I think when we're dealing with net metering specifically, we're dealing with a very specific type of energy generation or a specific set of tariffs that are designed or implemented through PURPA requirements outside of the context of a rate proceeding. And maybe I'm getting a little bit ahead of myself because I'm not sure I

really understand the difference between PURPA requirements and what the requirements are in the context of a broader rate proceeding or how they impact one another.

I think, again, my position is that it needs to be part of a broader context or a broader review and evaluation of costs and benefits, not a unilateral position on costs through a tariff.

BOARD MEMBER WAGNER: And you don't feel that this is a broad enough case to bring into account transmission costs to all customers, not just customers dealing with net metering?

THE WITNESS: Specifically for net metering, I will say that is correct, this is not the appropriate context, because when we're dealing with net metering, we're looking at, you know, there's banking requirements of those energy credits that you have that you can carry through the year, and those requirements are valued at the avoided cost rate. The avoided cost rate does not take into consideration transmission avoided costs.

So there is a whole slew of costs and benefits associated with some net metering customers that are a little unique that are addressing requirements of specific elements of federal policy,

but it is not very specific to just cost line items in a rate proceeding.

BOARD MEMBER WAGNER: Do you recall how the avoided cost is determined in Iowa, how that's determined?

THE WITNESS: I think it's the use of the locational marginal price, the forecasted 12-month locational marginal price. That's for energy. And for capacity, I think it's the zonal price established under the MISO capacity construct.

BOARD MEMBER WAGNER: You said that doesn't take into account transmission?

THE WITNESS: I believe it doesn't take into account transmission costs--or a transmission avoided cost determination, that is correct. It takes into account line losses or a transmission loss factor, but it doesn't take into account a transmission avoided cost rate.

BOARD MEMBER WAGNER: Okay. With respect to the Renewable Energy Rider, can you explain why you feel that's beneficial--why the OCA feels that's beneficial?

THE WITNESS: Well, one of the things that we secured as part of the settlement, as Mr. Kruger alluded to earlier, is securing a reduction on the

PTC balance carryforwards, the revenue requirements for those carrying costs that will flow through the rider, and that's a significant reduction, and it is a big risk mitigation piece.

You know, one of the things that OCA was concerned with was transferability of costs that are automatically recovered through the transmission rider.

The fact that we have made steps to reduce a lot of that uncertainty or bring to bear or have more consistent or transparent or reduction of costs that are recovered through the transmission rider is a great benefit. Based on the evaluation projections that we looked at, the transmission rider will result in consistent net energy benefits, taking into account net energy margin sales and net energy margin benefits, a reduction of the PTC carryforwards; and another component of that was the O and M, moving the O and M expenses from the transmission rider to base rates.

As part of our discovery we couldn't secure information that will guarantee 0 and M expenses to be predictable for anything more than two years, because a contractual agreement is only guaranteed for two years.

I'm not going into confidential? Okay. 1 2 So one of the things that we did is we 3 removed those costs in base rates, so it removed a 4 lot of that uncertainty, and based on the projections 5 that we made, we feel that the transmission rider in 6 its current construct, although we're still concerned 7 about some elements of it, it still will provide--it still will result in benefits to customers in the 8 9 long run. 10 BOARD MEMBER WAGNER: All right. Thank you. 11 MR. CALLISTO: Your Honor, I do have one or 12 two questions as follow-up to Board Member Wagner's 13 questions. 14 CHAIRPERSON HUSER: Go ahead, Mr. Callisto. 15 MR. CALLISTO: Thank you. 16 CROSS-EXAMINATION BY MR. CALLISTO: 17 18 Q. Mr. Munoz, transmission costs are being 19 decided in this rate review; is that correct? 20 Α. I don't believe so. 21 Q. Not transmission costs. Let me rephrase 22 that. 23 The allocation of transmission costs are 24 being decided in this rate case; is that correct? 25 Α. Yes. I believe that Mr. Davison is probably more appropriate to answer questions on the transmission cost allocation.

- Q. And the class cost of service that will allocate that, as well as the issue of the transmission rider, are topics of substantial testimony in this case?
- A. Yes. That's still under contention. Again,
  I'm not a class cost-of-service witness, so I
  wouldn't be able to answer any of those questions.
- Q. And all parties with an interest in the issue of the transmission costs and how they should be appropriately allocated to customers are in this case?
- A. I believe so, but you'll want to confirm that with Mr. Davison.
- Q. And you had a response to one of
  Board Member Wagner's questions that talked about
  DG as a specific type of generation with its own
  tariff, and that, at least in part, in your
  estimation, is a reason why this should be done--the
  issue of the transmission costs should be addressed
  in a separate docket; is that correct?
  - A. It should be part of the net metering--in the context of a net metering docket, yes.
    - Q. Because it's a separate kind of generation

with its own tariff; correct?

- A. Yes. It's a separate type of customer. I wouldn't even consider it a class customer.
- Q. And you're aware that in this case the issue of costs allocated to standby generation, as evidenced by the participation of a number of parties in this case, is highly contested?
- A. I mean I am aware because I sit next to Mr. Davison, but not other than that.
- Q. And that's a separate kind of generation as well; that is, the customers who take under that separate tariff are generating their own energy?
- 13 A. Sure.

- Q. And the Board has the opportunity and will have presumably decided that issue, the allocation of costs to that customer class, in this rate case?
- A. I'm not a class cost-of-service expert witness, Mr. Callisto.
- Q. I'm just asking you about your knowledge of what issue is being taken up in this case, not the class cost of service specifically.
- A. Yes, I am aware that class cost of service and rate design and transmission cost allocation is still under contention.
  - Q. And your position on the merits on this

- 1 issue was not raised in your direct testimony;
  2 correct?
  - A. No, it was raised in rebuttal.

4

5

6

7

8

9

10

11

12

13

14

16

20

21

22

23

24

25

- Q. And in your rebuttal testimony you adopted the positions of other parties; correct?
- A. I adopted Ms. Johannsen's from ELPC, the Environmental Intervenors, position, yes.
- Q. And you've done no independent analysis yourself on this issue?
- A. I think that was the point of my testimony, is that we need to have an independent analysis to assess the impact of transmission costs--transmission changes in the tariff as it relates to net metering.

MR. CALLISTO: No further questions.

15 CHAIRPERSON HUSER: Mr. Long?

MR. LONG: No questions.

17 CHAIRPERSON HUSER: The witness may step 18 down.

(Witness excused.)

CHAIRPERSON HUSER: Ms. Easler, we are thinking about calling Mr. Michek back up, get his public testimony done prior to Mr. Davison or Mr. Bents.

MS. EASLER: Mr. Bents, yes. Okay.

MR. CALLISTO: Your Honor, on Mr. Michek,

there are two topics I'm aware that the Board--or at 1 2 least the one, I believe, is probably the UIPlanner. 3 That was a topic of yesterday and also this morning. 4 The other, which is the one that we presented this 5 morning, is the Renewable Energy Rider analysis the 6 company has done for the five-year lookout. 7 The first topic is certainly something of, I 8 believe, probably 100 percent public session. 9 Renewable Energy Rider discussion, I think to be of 10 value to the Board, is something that should be done 11 in confidential. 12 CHAIRPERSON HUSER: We understand that we 13 have to pull him and Mr. Vognsen back up when we go 14 into closed session. I thought I would take care of 15 the public as much as we could. 16 MR. CALLISTO: Okay. I just wanted to make 17 sure. CHAIRPERSON HUSER: I think there's only two 18 19 questions. 20 MR. CALLISTO: Thank you. 21 IPL calls Mr. Michek back to the stand. 22 23 24

| 1  | NEIL E. MICHEK,                                       |
|----|---|
| 2  | recalled as a witness by Counsel for Interstate Power |
| 3  | and Light Company, having been previously duly sworn  |
| 4  | by Chairperson Huser, was examined and testified      |
| 5  | further as follows:                                   |
| 6  | CHAIRPERSON HUSER: Mr. Michek, you've                 |
| 7  | previously been sworn in.                             |
| 8  | Do you understand that?                               |
| 9  | THE WITNESS: I understand that.                       |
| 10 | CHAIRPERSON HUSER: Board Member Wagner.               |
| 11 | BOARD MEMBER WAGNER: Mr. Michek, I'm going            |
| 12 | to give this another shot, and hopefully you're the   |
| 13 | right witness.  |
| 14 | With respect to cloud services, how are               |
| 15 | cloud services treated in Iowa with respect to 0 and  |
| 16 | M expense or capital expense? And then I will go      |
| 17 | into that a little further.                           |
| 18 | THE WITNESS: Cloud-based services are an              |
| 19 | O and M expense.                                      |
| 20 | BOARD MEMBER WAGNER: And is that by rule,             |
| 21 | law, or just how it's traditionally been handled?     |
| 22 | THE WITNESS: It is by GAAP accounting                 |
| 23 | rules, to my knowledge.                               |
| 24 | BOARD MEMBER WAGNER: Okay. And does IPL               |
| 25 | have any cloud services?                              |

THE WITNESS: The one that I--and I just 1 2 confirmed with Ms. Cigrand. The My Account software 3 or program that she was mentioning earlier will be a cloud-based system. Outside of that, I'm not aware, 4 5 but I believe we do have others. I just don't know 6 the details. 7 BOARD MEMBER WAGNER: So data for AMI, 8 that's collected through the AMI system, or any of 9 that, that is all collected and stored in-house, if 10 you will? 11 THE WITNESS: I am not certain if the data 12 is stored in-house or on the cloud. 13 BOARD MEMBER WAGNER: Okay. Thanks. Ι 14 guess do you know if there's anywhere that that is 15 specifically outlined in any exhibits on what that 16 amount is? 17 THE WITNESS: Not that I'm aware of or not that I recall. 18 19 BOARD MEMBER WAGNER: Okay. Mr. Callisto. 20 remind me, is that the the only issue? 21 MR. CALLISTO: The only other information is 22 if you wanted additional information on the 23 UIPlanner. CHAIRPERSON HUSER: You've heard the 24 25 testimony on the UIPlanner. What information can you

why would you believe that it would not provide more transparency and efficiency to this process?

THE WITNESS: Well, first, I don't think
I've ever gone on record that it wouldn't provide
more transparency. We had a technical conference
session with Board staff, parties, anyone that was
available to attend earlier this year, you know, at
your direction, where we walked through the UIPlanner
system.

We just do not have the Regulatory Module at this stage. Part and parcel of that is we are currently going through an upgrade of that system, the underlying financial system. We needed new hardware. We've had the system for 10 years, and it was basically starting to run too slow and inefficiently, and there's kind of a rebuild going on in this calendar year. It's supposed to be done by the end of the year.

Before we could move to a Regulatory Module platform, we need to get that done and ensure that that's working appropriately, because anything that the Regulatory Module utilizes would be pulled from that underlying system.

CHAIRPERSON HUSER: Do you know what the

cost of that Regulatory Module is?

MR. CALLISTO: Your Honor, we have a number, and Mr. Michek can testify about where we got the number and when. We would consider the number itself confidential. I think we can give a directional indication of what that would be in the form of number of digits, so an X-digit figure.

CHAIRPERSON HUSER: Mr. Callisto, I thought the data requests that were provided by OCA were requesting that, and that was not provided or not available.

MR. CALLISTO: What we have is dated information from years ago, so there's not been a conversation of any recent amount or recent vintage with UI or with the organization that creates the UIPlanner. We are a UIPlanner customer, so we have UIPlanner, of course. What's at issue here is the Regulatory Module.

THE WITNESS: If I may just add to what Mr. Callisto said--and we mentioned this in the technical conference--the UIPlanner, while it is a system that UI provides to a number of utilities, is completely customized to each individual utility or each individual holding company of utilities, and that would include the Regulatory Module would be

customized for IPL differently than WPL. The cost information that Mr. Callisto alluded to earlier was from WPL and is several years old.

BOARD MEMBER WAGNER: Mr. Michek, do you agree with OCA Witness Kruger on the increased transparency and reduction in costs that that might provide, and other benefits?

THE WITNESS: Generally speaking, if appropriately designed, I think it could certainly provide efficiency in our development of rate-case information. I think it would provide consistency amongst ratemaking schedules, including--and potentially up to and including class cost-of-service-type information so that it is kind of automated and tied together. That's the entire basis of a UIPlanner-type system.

As to transparency, I think there would be transparency in, you know, the underlying schedules. There is probably-- One of the key items that Mr. Kruger testified to this morning and in his written testimony is issues with translation between the way we budget to operate our company and into a regulatory or a FERC account basis. That is going to take some significant work in order to make that more transparent, regardless of the UIPlanner. That

- 1 budget process is just done at a considerably higher 2 level or more summarized level and then has to be 3 brought back down. UIPlanner itself won't provide 4 that transparency. Any additional transparency would 5 be caused by the way we design that system just to 6 try to provide that transparency. 7 BOARD MEMBER WAGNER: Do you agree that it 8 might lead to a reduction in the number of data 9 requests by parties? 10 THE WITNESS: I would certainly hope so. 11 BOARD MEMBER WAGNER: If IPL were to utilize 12 and obtain the Regulatory Module, are there any 13 expectations that the company would have towards the 14 number of data requests or efficiency, that type of 15 thing? 16 THE WITNESS: Well, certainly before we would embark on it, just as we've testified on 17 18 various projects, you know, there would be some 19 analysis of that cost relative to what we think the 20 benefits will be, and try to quantify them into a 21 financial number. There are certainly some 22 regulatory process items, as I just mentioned, that 23 would be efficiency.
  - As far as expectations on, you know, reduction of data requests, I really don't know. I

```
do believe that the number of data requests that we
1
2
    responded to in this proceeding in part was due to
3
    the UIPlanner and the difficulty of transparency and
4
    very much in part to this being the very first
5
    forecasted test year.
6
             As I have discussed with you in prior
7
    meetings, we have been doing forecasted test years in
8
    Wisconsin for as long as I have been in this
9
    business, and it would take multiple cases to get to
10
    the data-request level that was dealt with in this
11
    proceeding. It's new, and we recognize it's new, and
12
    we strived to get all the information we could to all
13
    parties.
14
             BOARD MEMBER WAGNER: All right.
                                                Thank you.
15
             MR. CALLISTO: Nothing further.
16
             CHAIRPERSON HUSER:
                                  The witness may step
17
    down.
18
                                       (Witness excused.)
19
             CHAIRPERSON HUSER:
                                  Ms. Easler, Mr. Long?
20
             MR. LONG: OCA calls as its next witness
21
    Scott Bents.
22
             CHAIRPERSON HUSER: Good morning, Mr. Bents.
23
             MR. BENTS: Good morning.
24
             CHAIRPERSON HUSER: Please raise your right
25
    hand.
```

SCOTT C. BENTS, 1 2 called as a witness by Counsel for the Office of 3 Consumer Advocate, being first duly sworn by 4 Chairperson Huser, was examined and testified as 5 follows: 6 CHAIRPERSON HUSER: You may be seated. 7 Please make sure your mic is on and speak clearly into it. 8 9 THE WITNESS: Okay. I'll do my best. 10 CHAIRPERSON HUSER: Mr. Long. MR. LONG: Thank you. 11 DIRECT EXAMINATION 12 13 BY MR. LONG: 14 Q. Mr. Bents, did you file or cause to be filed 15 rebuttal testimony on September 10th, rebuttal 16 testimony on August 15th, and direct testimony on 17 August 1st, as well as accompanying exhibits? 18 Α. Yes, I did. 19 Q. Do you have any corrections or changes to 20 make? 21 I do have one correction that I just learned Α. 22 of this morning to make to my direct testimony on page 21, line 4. Between the word "out" and the 23 number "39," I omitted the word "of." 24 25 Any other corrections? Q.

- 664 No other corrections. 1 Α. 2 Q. Would the statements you made in the filed 3 testimony be the same if you made them today? 4 Α. Yes, they would. MR. LONG: Okay. With that, Mr. Bents is 5 6 available for questioning. 7 CHAIRPERSON HUSER: Board Member Wagner? **BOARD MEMBER WAGNER:** 8 Thanks. 9 We can stay on that. We'll start with that 10 since that's where we were. 11 Mr. Bents, in that portion of your testimony 12 you are concluding that customers are not as 13 concerned with reliability because that's the only--14 not the only, but a majority of the complaints that 15 the IUB receives is about high bills. Is that a 16 correct synopsis of your testimony in that section? 17 THE WITNESS: Yes, that's a good summary of 18 my conclusion. 19 BOARD MEMBER WAGNER: Do you think customers, 20 when they have an issue with service, are more likely 21 to contact the company or the IUB? 22
  - THE WITNESS: If I had to speculate, I would imagine that they would call the utility first before filing a customer complaint with the IUB.

24

25

BOARD MEMBER WAGNER: And so it could be

1 customers are concerned about reliability. We just 2 don't hear about it because they go to the company 3 first. 4 THE WITNESS: That's very possible, although 5 I guess you could say that they may go to the company 6 first when their bills are high too. I don't know 7 for sure. BOARD MEMBER WAGNER: You also in your 8 9 testimony and in general--and I don't have a specific 10 location, but you allude to that IPL should not be 11 recovering for AMI because they're not utilizing all 12 the functions of AMI. Is that also a correct 13 synopsis of your testimony? 14 THE WITNESS: Yes. That what's in my 15 testimony, and as part of the settlement, there is an 16 informal process that's being established now to give 17 the settling parties input on that. 18 BOARD MEMBER WAGNER: And you also mentioned 19 implementing AMR instead of AMI. 20 THE WITNESS: Yes, I did. 21 BOARD MEMBER WAGNER: And it was because the 22 functions that they are implementing in AMI are 23 effectively the same for AMR; correct? THE WITNESS: Yeah. My contention was that 24 25 AMI, as implemented, only had a few more features

than the AMR did.

BOARD MEMBER WAGNER: So for the utility to implement those other features that AMI provides, if they had gone with AMR, how would they achieve those features? Would they then have to switch out their meters again to AMI?

THE WITNESS: If they wanted to have additional features, yeah, they would have had to switch from AMR to AMI.

BOARD MEMBER WAGNER: So is there a benefit of installing AMI today that provides them with the opportunity to add those features without having to replace meters?

THE WITNESS: I think you're saying--if you're asking if AMI allows them to sort of leapfrog the AMR technology, then I guess that would be true.

BOARD MEMBER WAGNER: And if they had gone with AMR and then decided to move up, customers would have to pay for both AMR meters and then again the AMI meters; is that correct?

THE WITNESS: Yes, that's correct.

BOARD MEMBER WAGNER: So there is a benefit in going directly to AMI, that customers wouldn't have to pay that?

THE WITNESS: Yes, that would be correct in

that they wouldn't have to do a second upgrade from 1 2 AMR to AMI. 3 I think the main contention in my testimony was that the AMI was being implemented without 4 5 providing additional features that AMI is capable of. 6 BOARD MEMBER WAGNER: Going back to 7 reliability, your testimony indicated that the 8 Board's rules with respect to reliability metrics do not follow IEEE standards. 9 10 THE WITNESS: Yes. Okay. And let's see. Ι 11 have to refresh my memory on this, but the Board's 12 rules in Chapter 20 when it comes to service 13 reliability don't follow the current IEEE standard 14 when it comes to excluding major events--or the 15 definition of major events, I should say, and that is 16 why I asked for, in a data request that I filed as an 17 exhibit in my testimony, IPL to provide their safety 18 and safety metrics that were calculated per IEEE 19 standards. 20 BOARD MEMBER WAGNER: The analysis that you 21 have in your testimony is based on the IEEE standards? 22 THE WITNESS: Yes, because that would allow 23 an apples-to-apples comparison to other utilities. BOARD MEMBER WAGNER: Do you think the Board 24

needs to change their rules to match the IEEE

standards? 1 2 THE WITNESS: I do, and actually in that 3 rulemaking I think we have filed some comments in 4 that regard. BOARD MEMBER WAGNER: All right. Did you do 5 6 any analysis on how reliability and those metrics are 7 related to spending by a utility? 8 THE WITNESS: I did not analyze the spending 9 and reliability comparison, no. 10 BOARD MEMBER WAGNER: Do you know of any 11 studies or analysis that has done that? 12 THE WITNESS: I am not aware of any, but I 13 think that would be an interesting thing to look at. 14 BOARD MEMBER WAGNER: Finally, my last 15 question is--actually, my second to last--does the 16 settlement change in any way the plans of IPL with 17 respect to their undergrounding? 18 THE WITNESS: I don't think that it changes 19 their plans, but it does establish an informal 20 process for the settling parties to review and weigh 21 in on that undergrounding, because that falls under 22 the base distribution investments. 23 BOARD MEMBER WAGNER: Okay. Do you know

where that is at in the settlement? Can you point to that in the settlement or a general--

24

THE WITNESS: I think it starts on page 12, 1 2 but I'm not a hundred percent certain. 3 BOARD MEMBER WAGNER: My final question is, is this the first time you've had the opportunity to 4 5 testify in front of the Board? 6 THE WITNESS: Yes, it is, and I was told 7 that I'm supposed to bring treats, but I didn't think 8 that was a good idea. 9 BOARD MEMBER WAGNER: Thank you. I have no 10 further questions. 11 BOARD MEMBER LOZIER: Mr. Bents, you had a 12 discussion with Board Member Wagner about AMI. 13 Can you identify some of the benefits of AMI 14 that IPL is not using and does not plan to use? 15 THE WITNESS: Sure. 16 BOARD MEMBER LOZIER: Excuse me. Has no 17 current plans to use. THE WITNESS: As far as no current plans to 18 19 use, I think one thing that came out was--or has been 20 mentioned by other witnesses was time-of-use rates 21 and allowing the integral data that's provided by AMI 22 to be used for that. 23 Another example, I think, could be 24 controllable thermostats where a customer's HVAC 25 system could be controlled by data provided by the

- 1 AMI meter. In-home displays is another example.
- 2 BOARD MEMBER LOZIER: Anything else that you
- 3 can think of?
- 4 THE WITNESS: Not off the top of my head.
- 5 | I'm sorry.
- 6 BOARD MEMBER LOZIER: And you briefly
- 7 discussed undergrounding. Is it your understanding
- 8 | that undergrounding has a significant additional cost
- 9 in lieu of overhead lines?
- 10 THE WITNESS: The research that I've done
- 11 | shows that undergrounding is fairly expensive
- 12 | compared to overhead lines.
- 13 BOARD MEMBER LOZIER: Is a utility required
- 14 to come to the Utilities Board before taking on an
- 15 | expenditure in that amount?
- 16 THE WITNESS: That, I don't know.
- 17 BOARD MEMBER LOZIER: Okay. All right.
- 18 | Thank you. Nothing further.
- 19 CHAIRPERSON HUSER: Mr. Long?
- 20 MR. CALLISTO: Your Honor, I do have one.
- 21 CHAIRPERSON HUSER: Mr. Callisto.
- 22 MR. CALLISTO: Thank you.
- 23 CROSS-EXAMINATION
- 24 BY MR. CALLISTO:
- 25 Q. Mr. Bents, do you agree that undergrounding

- is a distribution expense?
- A. That's how I understand IPL Witness Dyer's testimony, yes.
- 4 MR. CALLISTO: Could you please put up the settlement agreement, page 13?
- 6 BY MR. CALLISTO:

7

8

9

10

11

12

13

14

15

16

17

- Q. And I will ask you to read at the top of page 13 from Article X, section B, the sentence that begins "IPL shall not be limited..."
- A. "IPL shall not be limited in undertaking base distribution work for the maintenance, operation, safety, or reliability of the distribution system, including on project-specific bases, deploying ADMS or line sensors."
- Q. So you understand that sentence to be an agreement among the settling parties that IPL is not limited to undertake its base distribution work for the reasons listed there?
- 19 A. Yes.
- 20 MR. CALLISTO: No further questions.
- 21 CHAIRPERSON HUSER: Mr. Bents, if you have 22 the knowledge to answer this question, where would 23 the Board be informed of what is being expended in a 24 future test year that would fall under the sentence 25 you just read?

THE WITNESS: I'm sorry. I don't think I do 1 2 have the knowledge on that. 3 CHAIRPERSON HUSER: Do you believe that 4 undergrounding is the most beneficial for customers 5 in Iowa? 6 THE WITNESS: I think there are circumstances 7 and locations where it does make a lot of sense, and I think there are other locations where it's not as 8 useful. 9 10 CHAIRPERSON HUSER: Mr. Long? 11 REDIRECT EXAMINATION BY MR. LONG: 12 13 Q. Regarding undergrounding, Mr. Bents, could 14 you give us a little bit of a history of IPL's 15 statements about what it plans to do with 16 undergrounding and include where sort of they left 17 off the last we heard? In IPL's initial filed direct 18 Α. Sure. 19 testimony, they said that undergrounding would be 20 performed in situations where it made sense from a 21 total life-cycle cost analysis. 22 Then during the discovery process, we found 23 that undergrounding was going to be performed as a 24 default as long as six criteria were met. None of

those criteria included a total life-cycle cost

1 analysis. Then I think in the prehearing brief we 2 3 learned that IPL intended to perform undergrounding 4 where it made sense on a cost analysis basis, but 5 only at the rate of their standard replacement or 6 rebuilding for distribution lines, I think one-and-a-7 half to two percent per year. Nothing further. 8 MR. LONG: 9 CHAIRPERSON HUSER: The witness may step 10 down. 11 (Witness excused.) CHAIRPERSON HUSER: Mr. Cook, you may call 12 13 your next witness. 14 MR. COOK: OCA calls Seth Davison. 15 SETH A. DAVISON, 16 called as a witness by Counsel for the Office of 17 Consumer Advocate, being first duly sworn by 18 Chairperson Huser, was examined and testified as 19 follows: 20 CHAIRPERSON HUSER: You may be seated. Mr. Cook. 21 DIRECT EXAMINATION 22 23 BY MR. COOK: 24 Q. Please state your name for the record.

25

Α.

Seth Davison.

- Q. And by whom are you employed?
- A. The Office of Consumer Advocate.
- Q. What is your position with the Office of Consumer Advocate?
  - A. I am a utility analyst.
- Q. Did you prepare direct testimony and exhibits and rebuttal testimony and exhibits filed in this proceeding?
  - A. I did.

1

2

3

4

5

6

7

8

9

- Q. Are you aware that Article XVII of the nonunanimous partial settlement agreement anticipates
  the parties withdrawing their testimony concerning
  the subsequent proceeding?
  - A. I am familiar with Article XVII.
- Q. Your direct testimony contains the following references to subsequent proceeding: Page 4, lines 9 through 11; page 5, lines 1 and 2; page 36, lines 17 through 21; page 37, lines 1 through 17.
- Your rebuttal testimony contains the following references to subsequent proceeding:
- 21 | Page 2, line 15; page 3, line 9; page 17 through 22 | page 20.
- Would you like to withdraw these portions of your testimony?
- 25 A. Yes, I would.

- Q. Do you have any other corrections or additions to your direct or rebuttal testimony?
  - A. I do not.
- Q. As you sit here today, are you declaring that the testimony you previously filed is true and correct?
- A. Iam.

MR. COOK: OCA makes Mr. Davison available for cross-examination.

CHAIRPERSON HUSER: Mr. Callisto.

## CROSS-EXAMINATION

- 12 BY MR. CALLISTO:
- Q. Mr. Davison, please describe the AED methodology.
  - A. Okay. So the AED is a measure of each individual class's utilization on an average and excess basis. It calculates each class's average usage by taking the total load for that individual class in a test year and dividing that by the number of hours in the year, 8760, and then it takes that average, and then the non-coincident peak of that individual class and the delta between the non-coincident peak and the average for that class is used to determine the excess portion, and then they're weighted accordingly.

- Q. And it's your suggestion in this rate case that as to the AED allocation or the AED cost-of-service approach, that IPL use what you characterize as, I believe in your words, a blended approach, 50 percent based on 2016 and 50 percent based on 2018; correct?
  - A. That's correct.

- Q. And in suggesting that approach and in making your testimony, did you review the average component and excess component for each of those years--that is, 2016 and 2018--on a class basis?
- A. No. I just looked at the final allocation. I mean inherent in that I looked at that; but, no, in the calculation of the blended approach, as you characterize it--I believe I said composite--I just took the final allocation that resulted in those individual test years.
- Q. Maybe we're talking about the same issue. I have another exhibit.
- A. Okay.
- MR. CALLISTO: This will be IPL Hearing
  Exhibit 9, and I'm also going to give you No. 10, as
  well, at the same time.
- 24 CHAIRPERSON HUSER: Mr. Callisto, is this 25 one 8?

- 1 MR. CALLISTO: That should be 9.
- 2 CHAIRPERSON HUSER: This is 8?
- 3 MR. CALLISTO: That should be 10.
- 4 CHAIRPERSON HUSER: Got it.
- 5 MR. CALLISTO: Thank you.
- 6 CHAIRPERSON HUSER: Mr. Callisto, you may
- 7 proceed.
- 8 MR. CALLISTO: Thank you.
- 9 BY MR. CALLISTO:
- 10 Q. Is it correct, Mr. Davison, that your
- 11 | Rebuttal Workpaper No. 1 was based upon IPL's
- 12 response to OCA Data Request 481, Attachment A, and
- 13 | that that Attachment A is what I have presented to
- 14 | you as IPL Hearing Exhibit 9?
- 15 A. I believe so. We could pull up my
- 16 | workpaper, my Rebuttal Workpaper 1, to confirm that,
- 17 | but I believe that's correct. Yes, it is.
- 18 Q. And please describe what is represented in
- 19 | Hearing Exhibit 9.
- 20 A. Excuse me, sir. Which one is which?
- 21 Q. I'm sorry. Hearing Exhibit 9 is the
- 22 | numbers, the one that's up on the screen right now,
- 23 and it's double-sided.
- A. Okay. What is being identified in this
- 25 exhibit is the inherent volatility in the average

- and excess allocator. It is a key flaw of the allocator.
- Q. And this shows the average and excess percentages for each of the classes that you used in your rebuttal testimony; correct?
- Α. More or less. I mean in this one we have a combined approach resulting from in one of the rate cases that resulted in this test-year data, there was a split between the LGS and bulk customers; but, yes, more or less, yes.
- Q. And so working down from the top--and I'm looking down the rows now. I'm sorry they're not numbered, but it's the same on the front and the 14 back. The top row is the ratios for the residential class?
  - Α. Yeah. Those look like that would be, yes.
  - Q. And the next row is GS, followed by LGS, high load factor, and then the combined LGS/HLF that you just talked about?
    - Α. Yes, sir.

2

3

4

5

6

7

8

9

10

11

12

13

15

16

17

18

19

20

21

22

23

24

25

Q. And based upon your knowledge of these numbers that you received from IPL and used in your rebuttal testimony, is it your opinion, looking now at Exhibit 10, that Exhibit 10 is a full and fair representation of those same ratios from the data set

- that I just provided to you as to residential specifically?
- A. It's a lot more fun to look at; but, yes, I think so.
- Q. And would you agree that looking at the chart that presents those figures, that the 2016 excess percentage is anomalus vis-à-vis the other excess numbers in that chart?
  - A. I would not.

- Q. And what's your basis for that statement?
- A. If you look at the test-year data, it was taken over since 2001, and so there could be significant system usage characteristics, as well as variations in weather, that could be driving these results.
  - Q. Is it possible that the billing estimation issue that occurred in 2016 with the residential class could have impacted the excess component for that year?
- A. It is possible, but I would hope that IPL would have raised that in RPU-17-1.
- Q. So your statement that I think you just made is in reference to the fact that IPL used this same information in its last electric rate case?
  - A. Yes, without any consideration of it being

an anomalus year.

- Q. And the use of that information in 2016, because it was the most recent at that time, obviously didn't have the benefit of what we now see in 2018 where that figure has risen back up to historical levels, did it?
- A. I disagree with the historical-level characterization, because if we look at the average and excess allocation that IPL used in RPU-10-1, it's more similar to that than RPU-17-1 or the current one that IPL is proposing in this rate case.
  - Q. I'm sorry. Could you say that again?
- A. If you look at the allocation level that IPL presented in RPU-17-1, it is closer to that which IPL also presented in RPU-10-1, which was used in the prior rate proceeding to determine the allocation of generation and transmission expenses.
- Q. Mr. Davison, let's change topics. I want to talk about your suggestions concerning the allocation of costs for key account managers.
- Please describe, in your view, why a labor allocator is developed to allocate costs in a class cost-of-service study.
- A. Mr. Vognsen touched on this yesterday when you guys were talking about socialization costs and

- directly assigning them, and he said it is for those costs which are difficult to kind of parse out individually which classes should receive them.
- So in a class cost-of-service study, the largest expense category that IPL elects to use the labor allocator for is, I believe, the general, common, and intangible plant.
- Q. And that's a category of costs that the company incurs to serve a variety of functions over a variety of business uses; correct?
- A. Yes, it is.
- Q. And that makes sense to use the labor allocator, because as you just said, you can't distinguish where those costs go in an easy way?
  - A. Yes.
- Q. But the labor allocator also is used to assign costs that are more easily distinguishable; correct?
- 19 A. Yes.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

22

23

24

- Q. So things like software costs are allocated pursuant to the labor allocator?
  - A. Yes.
  - Q. And that could be allocated, for example, instead of on the labor allocator, but based upon the number of bills, if it's billing software, as an

example?

- A. No, because as you characterized it earlier, it's hard to parse out, and I don't know if we can weight each number of bill equally and the economic impact it has to that end-use customer. I don't know if that's a good way to characterize that or if that would be a wise way to do that.
- Q. So just to continue with that hypothetical, if the company has, as it does, CIS software that deals with billing, customer information service software, you don't believe that that software, which is currently allocated under the labor allocator, in a broad way could be used--could be allocated more specifically to customers based upon the number of bills?
  - A. Not a pure bill number. I'm thinking there should be some sort of weighting convention added to that.
  - Q. But it could be teased out and done differently in a way than it's done right now using the labor allocator?
    - A. I suppose.
  - Q. The same question for you on regulatory assessment costs. Some of those go through the labor allocator; correct?

A. I believe so, subject to check.

- Q. And could those costs also be assessed to a customer class based upon the type of filing or docket which we're addressing on a particular issue?
- A. I guess. That would be a really difficult thing to do, and that would be a hard call for me to make and decide how to weight those.
- Q. But it would take the same kind of analysis, perhaps, that you've done in your testimony to get to the ability to tease out the KAM costs differently; correct?
- A. No, because if you look at my Direct Exhibit 11 response to OCA Data Request 356, page 2, there is information available on that as far as how much time each type of KAM spends serving each type of customer class. I think that would be far more difficult in the context in which you're speaking.
  - Q. But you have not looked at that, have you?
- A. I have not, no.
- Q. You have looked carefully at the KAM costs?
- 21 A. As carefully as I could, yes.
  - Q. Isn't it reasonable to say you picked just one cost that's typically assigned to the labor allocator when in fact a number of costs could be teased out and addressed differently?

- A. Yes, but this is a readily identifiable one, and given your exchange with Mr. Vognsen last night, socialization is a slippery slope, as you characterized it.
- Q. Is it realistic to do this with all the costs that are currently assigned to the labor allocator?
- A. No; but those that are easily recognizable, such as this that you spoke of last night, it is.
  - Q. Okay. Let's change topics to uncollectibles.

When you just mentioned a second ago you believe that direct assigned is possible, that's what you're doing or advocating for with the KAM account costs; correct?

- A. With the KAM expenses, yes.
  - Q. But you're not doing that with uncollectibles?
- 17 A. No, sir.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

18

19

20

21

22

23

24

25

- Q. And you prefer a class allocation based on a percentage of total revenues as opposed to a direct class assignment for uncollectibles; correct?
  - A. Yes, sir.
- Q. And I believe you give three reasons in your testimony for why you believe that's the case:

The first is that the Board approved your approach in the last rate case; is that right?

2

3

4

7

8

9

10

11

12

13

14

15

16

17

18

19

22

23

- It wasn't mine, but our Office's, yes, sir. Α.
- Q. But you recognize that IPL said they would agree, as part of that rate case, that they would revisit that issue?
- In the context of a historic test year, 5 Α. 6 right.
  - And how is that different here? Q.
  - Α. It's a forward-looking test year.
  - Q. How does the fact that it's a forwardlooking test year make IPL's current position any different?
  - Α. Because historically that's how they've been However, in a forward-looking test year, incurred. the best allocator, as I say in my testimony, that captures the potential size of any future revenue deficiencies would be the revenue collected from each class themselves.
  - I think this is sort of the second reason Q. why you indicated.
- 20 So the first, right, is that this is the way 21 this has always been done?
  - The second is you think it's better in a future test year.
- 24 Can you point to in this future test year any anticipated uncollectibles from large industrials

or high load factor customers?

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

- A. You can't anticipate uncollectibles.
- Q. But we certainly have a large amount of data that shows that there's a large amount of uncollectibles from the residential rate class.
- A. And you have a large amount of data that suggest where your potential uncollectibles come from, and that's your forecasted revenue for each class.
- Q. And can you point to any historical data that shows from the large industrial classes, high load factor classes, or other large customers uncollectibles that would support your analysis?
  - A. No.
- Q. I think your third reason for the approach you suggest for uncollectibles is what you refer to at page 26 of your direct as interclass equity.
- A. Right. Yes, sir.
- MR. CALLISTO: Can we turn to page 26 of his direct, please?
- 21 BY MR. CALLISTO:
- Q. Could you please read the question that begins on your direct testimony at line 12 and the first two sentences of your answer?
  - A. Yes, sir.

"Why does consideration of the final revenue allocation in the previous electric rate proceeding provide further credence to this approach?"

"Answer: It is a matter of interclass equity. In RPU-2017-1, an arbitrary adjustment to the final revenue allocation resulted in a shift of roughly \$37 million (29 percent) of the final increase from the industrial classes to the residential and small customer classes."

- Q. You can stop there.
- A. Okay.

- Q. So this, in your view, is an element of rough justice, to rebalance the equation?
- A. Well, it's actually quite congruent with the adjustment on the revenue allocation that IPL elected to make. It was a weighting of the final increase. 80 percent would be based on the current collection of revenues and 20 percent would be based on the actual class cost of service. I believe that's correct, subject to check. And that was done, in my opinion, to avoid rate shock. Actually, I think that was what was cited in the order. So you could say that was an interclass equity decision made by IPL then.
  - Q. But that is as to the whole allocation;

correct?

1

4

5

- A. Yeah, and I'm just--yeah, just one small part.
  - Q. Sure. You're just trying to use this piece to make up what you think was inequitable in the last rate case?
- A. You made a great point. It applied to the whole class cost of service, which is way more significant than what I'm suggesting here.
- MR. CALLISTO: No further questions.
- 11 CHAIRPERSON HUSER: Mr. Goodhue?
- 12 MR. GOODHUE: No questions, Your Honor.
- 13 CHAIRPERSON HUSER: Mr. Frank?
- MR. FRANK: Thank you, Your Honor. I just
- 15 have a couple of questions.
- 16 CROSS-EXAMINATION
- 17 BY MR. FRANK:
- 18 Q. Returning to the subject of the AED
- 19 methodology for purposes of determining cost
- 20 allocation, specifically, you applied your AED
- 21 methodology in allocating costs for transmission;
- 22 | correct?
- 23 A. Yes, sir.
- Q. And you have used what you had called the composite AED methodology in this case?

- A. Yeah. I equally weighted the 2015 test year load research data with the 2018 test year load research data because I was concerned with the use of the 2018 test year's load research data only in one instance, in determining the final increase, so that's not really how costs were going to be caused.
- Q. And that was a form of the average and excess demand methodology; right?
  - A. Yes.

- Q. And you did not provide testimony about the use of the 12-CP allocator for transmission costs; correct?
- A. I did not.
- Q. Would you be opposed to the use of a 12-CP allocator for transmission costs?
  - A. As proposed by ADM Witness Stephens in this current proceeding, no. However, I would like to couch that by saying there are significant concerns of rate shock and shifts in costs related to a movement to that allocator, so if that allocator or allocation scheme were to be used for the transmission costs, it would have to be gradually phased in for it to be equitable, in my opinion.
  - Q. So when you're referring to rate shock and shifts in costs, are you referring to the results of

- 1 applying a class cost-of-service study based on 12-CP
- 2 for transmission costs so that it doesn't result in
- 3 the shifting of the allocation of revenues from one
- 4 class to another?
- 5 A. Yes. Perhaps it would be best to pull up
- 6 ADM Direct Stephens testimony.
- 7 Q. Perhaps page 34?
- 8 A. Is that Table 4?
- 9 Q. Yes.
- 10 A. All right.
- 11 Q. While they're doing that, you did review
- 12 Mr. Stephens' direct testimony; correct?
- 13 A. Yes.
- 14 Q. Including page 34?
- 15 A. I was referencing Table 4, so probably
- 16 page 33. Thank you.
- So as outlined in my testimony, my direct
- 18 | testimony on page 12--I'm sorry to jump around like
- 19 this--I show that a three-and-a-half percentage point
- 20 change in the average and excess allocation results
- 21 in a huge shift of costs.
- I'm good to stay here. Sorry.
- That was just illustrated to say that
- 24 we're now talking about for the LGS class, if we
- 25 look at this Table 4 here, I mean that's almost a

- 1 15 percentage point change, and if I had just used
  2 the three-and-a-half percentage point change and the
  3 shift in costs that would result in that, that's why
  4 I would have to recommend a phased-in approach if the
  5 Board were to find a 12-CP to be the best approach to
  6 allocate transmission costs.
  - Q. And just so we're clear, if we can turn to page 34 and Table 5, this is another representation--Yes, this is the right page. Sorry.
  - This is just another representation of the dollar value associated with that shift that you're talking about; correct?
- 13 A. Yes.

8

9

10

11

12

18

19

20

21

22

23

24

- Q. So when we look at the LGS class, it goes from \$111 million based on IPL's proposal to \$155 million under ADM's proposal which used the 12-CP methodology; correct?
  - A. Yes.
  - Q. So when you're talking about a phase-in, are you talking about phasing in the use of a different class cost-of-service study as the allocator or are you talking about the allocation of revenues?
  - A. The allocator. I mean that would be my idea right now. Just on the stand at the moment, that's what I would do. Perhaps there's a better methodology

to phase in such an approach.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

- Q. Okay. So it would be worth exploring if the Board decided that use of a 12-CP transmission allocator would be appropriate?
- A. Okay. Yeah. If the Board were to decide that it would be appropriate, I would say it would have to be necessary to phase it in, and the methodology by which that would be done could be explored.
- Q. Do you have any idea what the phase-in would be? Three years, for example?
- A. I could not say. If you were to do it over too long of a time, I mean you would have subsequent rate review proceedings, and stuff like that, that would kind of muddy the waters, but you wouldn't want to do it too aggressively, so I hesitate to say.
  - Q. Something to be explored?
- 18 A. Something to be explored, yes.
- MR. FRANK: Thank you. That's all I have.
- 20 CHAIRPERSON HUSER: Are there any other
  21 parties that wish to ask any questions of this
- 22 | witness?
- MR. CALLISTO: Your Honor, if I may be indulged with one follow-up, or two, to what ADM just asked.

1 CHAIRPERSON HUSER: Mr. Callisto.

2 FURTHER CROSS-EXAMINATION

BY MR. CALLISTO:

3

8

9

10

11

17

18

19

20

21

22

23

24

- Q. Mr. Davison, staying on this same table, the
  ADM approach, as counsel just noted, shifts a large
  amount of money, in your opinion, from--or at least a
  large amount of money to LGS; is that correct?
  - A. Yes, sir.
    - Q. It also shifts a large amount of money away from the residential class; is that right?
  - A. Yeah.
- Q. And that's about \$27 million based upon my rough math.
- 14 A. Yes.
- 15 Q. So it's a \$27-million savings to residential 16 customers.
  - A. If the Board were to adopt the approach and it was after a phase-in, if we just look at these numbers in isolation, all else equal, yes.
    - Q. And if it was reversed--that is, if the \$27 million instead of being a benefit under the ADM approach to OCA--excuse me--to the residential class was actually to its detriment--that is, it increased it by \$27 million--would you still be taking the position that you have today?

- A. No. The reason that I took the position that I have is actually it's a good example of what you provided me with in your Hearing Exhibits 9 and 10. It shows the inherent volatility in the average and excess allocation.
- If you use the 12-CP approach, it takes into account the variability of each class's use throughout the year, and it does not pin the entire allocation of these massive expense categories on one peaking hour. It's similar to the approach that WPL uses. It is the approach WPL uses.
- Q. So I understand it to be that your position would be unchanged under the hypothetical I just gave you.
- A. If it was the--also, it is how--yeah, my position would be unchanged.
- MR. CALLISTO: Thank you. No further questions.
  - BOARD MEMBER WAGNER: Mr. Davison, is the OCA generally in favor or opposed to a nonstandard meter charge?
  - THE WITNESS: To the extent that there are unique costs that are incurred and they're well-calculated, those incremental costs should be recovered by those causers of those incremental

3

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

costs. For instance, rolling a truck. If they're 2 going to read twice a year, there's a cost associated with that, and it's unique because there's no need 4 for meter readers beyond those who elect for this provision. So I think there are certain costs that may not be appropriate to socialize and should be recovered.

BOARD MEMBER WAGNER: And so the costs that can be attributed to nonstandard meters should be charged to those customers? We might disagree--in your testimony you do have some disagreement on the charges, and I'll get to that in a minute, but generally you do feel that there should be a charge for customers who are causing those costs?

THE WITNESS: Yes, sir.

BOARD MEMBER WAGNER: And with respect to-there's a couple of areas, and I just want to understand your position a little bit better.

> THE WITNESS: Okav.

BOARD MEMBER WAGNER: On the nonstandard meter, in your testimony you mention that for customers who are choosing the reduced transmit AMI meter, there should be no charge to them, a zero charge for their choice of using a meter that transmits less frequently; is that correct?

THE WITNESS: Yeah. An AMI meter, yes. 1 2 BOARD MEMBER WAGNER: Can you just walk 3 through that a little bit more with me and explain 4 why you don't feel there's any cost? THE WITNESS: There's no cost in rolling a 5 6 truck to have those meters be read, so when you 7 eliminate that cost and the other costs I take issue 8 with that you referenced earlier, they don't cause 9 any costs, in my opinion; and furthermore, it 10 advances the utility's goal of having this metering 11 infrastructure be ubiquitous in their service 12 territory, and to the extent that--yeah, I mean it 13 just advances their common goal -- or their stated goal, 14 rather. 15 BOARD MEMBER WAGNER: I just want to be 16 clear. I think what you were getting to is you don't 17 have to roll a truck to read those meters so there's 18 no cost, but you kind of said like there's no cost to 19 roll a truck. 20 THE WITNESS: Yeah. 21 BOARD MEMBER WAGNER: What you meant was the 22 fact that they don't have to roll a truck to read a 23 meter, that that's why there's no cost. 24 THE WITNESS: Right, and that's the bulk of 25 the charge.

BOARD MEMBER WAGNER: With respect to if 1 2 they do have to program the system specifically for 3 those options, should those be included or not? THE WITNESS: I have an issue with that 4 5 because these customers are also paying for the 6 expense of--I don't know. I actually believe in 7 socializing that cost because it's something like if 8 you socialize it across all ratepayers, it's 9 something like six cents, which if we had no quibbles 10 with 87 cents per month, which Board Member Lozier 11 pointed out yesterday, we shouldn't have it there, 12 especially if it's advancing metering technology. 13 BOARD MEMBER WAGNER: So then later on when 14 you adjust for--what were the other-- I'm sorry. 15 I'm just going back. There were a couple of other 16 adjustments that you mentioned with respect to all of 17 the nonstandard meter alternatives, which brings what 18 you would recommend as a \$3.43 per month charge; is 19 that correct? 20 THE WITNESS: Yes, sir. And one moment. Ι 21 said "our" earlier. I should have said the 22 company's. I misspoke, just for the record. 23 BOARD MEMBER WAGNER: So that reduction from 24 the \$5, I believe it was, 47 cents proposed by IPL--25 THE WITNESS: You're correct.

BOARD MEMBER WAGNER: --that represents the 1 2 costs for taking out what you would say should be 3 socialized for the IT costs for the minimal pulse, and then what other? 4 THE WITNESS: You mean that referenced 5 6 testing? 7 BOARD MEMBER WAGNER: Well, so walk through with me the difference between the \$5--and I can't 8 9 remember if it was 47 or exactly what it was, but the 10 \$5 that IPL has proposed and your calculation--your 11 recommendation of \$3.43. What accounts for the 12 difference of roughly \$2 in that? 13 THE WITNESS: So it was the amortization of 14 the IT costs, which was \$50,000-and-change each year, 15 and then it was the elimination of the potential 16 meter replacements associated with potential moves of 17 customers, which was \$26,000, and I believe that 18 makes up the entire delta. 19 BOARD MEMBER WAGNER: Okav. So those two 20 components? 21 THE WITNESS: Yes, sir. 22 BOARD MEMBER WAGNER: With the IT costs, if 23 there were IT costs related to the other meters that 24 they've got to design a system such that they can 25 input those manual reads, those costs should be

| 1  | included?   |
|----|---|
| 2  | THE WITNESS: I believe so.                            |
| 3  | BOARD MEMBER WAGNER: And then finally you             |
| 4  | mentioned that your \$3.43 is predicated upon all the |
| 5  | current facts, but if the Board did indeed rule that  |
| 6  | the minimal pulse AMI meters should not include a     |
| 7  | charge, that would impact your recommended \$3.43.    |
| 8  | Can you explain how that would impact that?           |
| 9  | THE WITNESS: You would pull those customers           |
| 10 | electing to takebecause I assumeI think in this       |
| 11 | pool I provided the number of customers, and it       |
| 12 | included both reduced frequency transmission          |
| 13 | customers and those who are still going to have       |
| 14 | their analog meter, so if you pull that out, the      |
| 15 | denominator gets smaller.                             |
| 16 | BOARD MEMBER WAGNER: So you would spread              |
| 17 | the same amount of costs over a smaller number of     |
| 18 | customers?  |
| 19 | THE WITNESS: Yes, sir.                                |
| 20 | BOARD MEMBER WAGNER: That's all the                   |
| 21 | questions I have. Thank you.                          |
| 22 | THE WITNESS: Board Member Wagner.                     |
| 23 | BOARD MEMBER WAGNER: Go ahead.                        |
| 24 | THE WITNESS: It would also potentially                |
| 25 | reduce the number of like truck rolls, and stuff like |

```
that, so there might be some offsetting cost
1
2
    reductions as well, so there's that to consider.
3
             BOARD MEMBER WAGNER:
                                    Okay. With respect to
    the AED allocator that has been discussed, what's
4
5
    your position on the possibility of IPL updating that
6
    allocator each year for use in the transmission
7
    rider?
             THE WITNESS: I think that isn't a bad idea
8
9
    because as we discussed--there was a dialogue
10
    between--I forget which witnesses and which counsel.
11
    Sorry. But, you know, it's locked in stone, but it's
12
    not necessarily how those are being incurred,
13
    especially if there was a movement to a 12-CP
14
    approach, because as we discussed yesterday, that's
15
    how MISO incurs that cost, so it would be updated
16
    each year. I don't have any opposition to that.
17
             BOARD MEMBER WAGNER: And if the Board were
18
    to do a phased-in 12-CP approach, would that be
19
    called arbitrary later on by the OCA?
20
             THE WITNESS: Not by this witness.
21
             BOARD MEMBER WAGNER:
                                    Thank you.
22
             CHAIRPERSON HUSER: The terminology "labor
23
    allocator" and "labor indicator" have been used
24
    throughout your testimony. Is there a difference
25
    between the two?
```

```
THE WITNESS: Did I say "indicator"
1
2
    anywhere? I'm not familiar. If I did, I'm sorry.
3
    If I did, it was the wrong use. It should say
    "allocator," "labor allocator," everywhere.
4
5
             CHAIRPERSON HUSER: And describe that for
6
    me. What is that?
7
             THE WITNESS: The company takes the labor
    expense associated with--it's difficult. Could we
8
9
    actually pull up my Workpaper No.1? There shouldn't
10
    be anything confidential.
11
             So there's labor expenses associated with
12
    different aspects of the utility, and then--
13
             CHAIRPERSON HUSER: Let her catch up with
14
    you.
15
             THE WITNESS: Okay. If you don't have my--
16
    Oh, there. Thank you.
17
             Then the tab on the bottom, it should be all
18
    the way to the left. That's the one. All right.
19
    scroll down slightly, please.
20
             Okay. So as we see here in lines 32 through
21
    38, those are lines that are delineated in the
22
    document itself. It's actually rows within the Excel
    file about 46 through 52. Yeah. So that's the labor
23
24
    allocator development, and so what there are is there
25
    are different labor expenses associated with
```

```
production, transmission, distribution, customer
1
2
    accounting, and then customer service and
3
    information, CSI, CSI. And then so those labor costs
4
    are presented in aggregate in column D, and then the
5
    appropriate -- or the corresponding allocator is
6
    presented in column C, and that's how, then, that
7
    total sum of input total, is what it's labeled as
    there, is allocated, then, across customer classes.
8
9
              For instance, in line 32 the production and
10
    generation is allocated in accordance with the
11
    average and excess demand allocator for generation,
12
    and then at the end of that, each of those are
13
    summed, and that's how they then derive--the total is
14
    summed, and then each class's allocation is summed,
15
    and then we divide each class's allocation by the
16
    total, and that's how we derive the labor allocator.
17
             When I say "we," I'm speaking colloquially.
18
    Sorry.
19
              CHAIRPERSON HUSER: Can you repeat that last
20
           "When I say 'we,' I'm speaking..."
    part?
21
             THE WITNESS: I don't mean like OCA.
                                                     I mean
22
    like we, I quess, the class cost-of-service analysts.
23
              CHAIRPERSON HUSER:
                                  Thank you.
24
              THE WITNESS: Yes.
25
              CHAIRPERSON HUSER: Mr. Cook?
```

will take a one-hour-and-10-minute recess. We will

- 23 Q. Did you cause to be filed both direct and 24 rebuttal testimony and exhibits in this docket?
  - Α. Yes, I did.

- Q. 1 Do you have any changes or corrections to 2 that testimony or exhibits? 3 Α. None. 4 MS. VAN LOON: I hereby tender this witness 5 for cross-examination. 6 CHAIRPERSON HUSER: Mr. Frank. 7 MR. FRANK: Thank you, Your Honor. CROSS-EXAMINATION 8 BY MR. FRANK: 9 10 Q. Good afternoon, Dr. Latham. Good afternoon. 11 Α. 12 Q. Dr. Latham, you testified that class cost-13 of-service studies and resulting rates should be 14 designed to avoid creating subsidies from one class 15 to another: correct? 16 Α. Yes. 17 Q. And by "subsidy," you mean costs or revenues 18 that are properly allocated to one customer class are 19 in fact allocated to another customer class; correct? 20 Α. That's a fairly good description, yes.
  - And a subsidy also could occur if a customer Q. class causes costs to be incurred by the utility, but does not pay for those costs because they've been allocated to other customer classes; correct?

22

23

24

25

That's one of our principles, yes, the Α.

- Large Energy Group.
  - Q. A fundamental principle?
- 3 A. Yes.

2

4

5

6

7

8

9

10

24

- Q. And a subsidy also would include the allocation of revenues-- Let me start that question again, please.
- A subsidy would occur if a reduction in revenue allocation to one customer class as informed by a class cost-of-service study were in fact allocated to a different class; correct?
- 11 A. Could you repeat that?
- 12 Q. I hope so.
- 13 A. Yes.
- Q. A subsidy would include the allocation if a-- Let me break it down. Let me do it this way.
- If a class cost-of-service study indicates
  that revenue allocations should be reduced for one
  customer class--are you with me so far?
- 19 A. Yes.
- Q. --but in the design or the actual allocation of those revenues that reduction or part thereof were allocated to a different class, that would be a subsidy; correct?
  - A. There is a time dimension in that. It is not necessarily so, so to speak. As the Board has

- done with those types of situations, there's like a three- or four-year period by which some of those changes are accommodated, so it really depends upon what the--
  - Q. It might be a phase-in, for example?
- 6 Α. Yes, right.

2

3

4

5

7

8

9

10

11

12

14

15

16

17

19

20

21

22

23

24

- Q. Okay. But if a class cost-of-service study indicated that there should be a reduction in the revenue allocation from one customer class and that reduction were accomplished -- or that reduction were made smaller because some of the reduced revenues were allocated to a different class, that would be a 13 subsidy, even if it occurred over time?
  - I think so. I'm not really sure I'm completely following you on that because I keep going through in my mind--
  - Q. Dr. Latham, let's try it this way.
- Α. Sure. 18
  - Let's say a class cost-of-service study Q. indicated that Customer Class A was due a reduction in revenues of \$10 million, but in fact in the design of rates that \$10 million reduction were reduced to \$5 million.
  - Α. Right.
    - And the other \$5 million reduction was Q.

MR. FRANK: Mr. Stephens' direct, rebuttal, 1 2 and additional rebuttal testimony and exhibits have 3 been previously filed. DIRECT EXAMINATION 4 5 BY MR. FRANK: 6 Q. Mr. Stephens, do you have any corrections or 7 additions to your testimony? Α. 8 Yes. I have one minor correction to page 20 9 of my direct testimony. 10 Should I proceed or should I wait? 11 Please tell us what the correction is and Q. 12 identify on the page where the correction is, please. 13 Α. The correction is in Footnote 27. There's 14 an improper reference there. That reference should 15 be to Docket No. RPU-2017-0001, and the date should 16 be February 2nd, 2018. 17 That's the only correction. 18 MR. FRANK: Thank you, Mr. Stephens. 19 Mr. Stephens is available for questions. 20 CROSS-EXAMINATION BY MR. CALLISTO: 21 22 Mr. Stephens, would you agree that the Q. 23 transmission system is designed to serve load 24 hours a day? 24 25 Α. Yes.

- Q. Would you please turn to page 34 of your direct testimony, Table 5?
  - A. (Witness complies.)

2

3

4

5

6

7

8

9

10

11

16

17

18

19

20

21

22

23

24

- Q. And your recommendation, as I understand Table 5 and as has been discussed earlier by some prior witnesses, is a reduction using your 12-CP approach and the charges through the RTS to the standby class of somewhere around \$5.5 million?
  - A. That's correct.
- Q. And among other things, that will lead to an increase in the LGS class of about \$43.4 million?
- 12 A. I'm not sure what you mean by "among other 13 things."
- Q. I mean among other changes to other classes.I'm focusing specifically on the LGS class.
  - A. Yes. If you go all the way to cost of service in a flash-cut approach, it would increase costs to the LGS class by approximately the amount you stated.
  - Q. And you've not testified anywhere in this case that the Board should do anything other than your 12-CP approach, have you?
  - A. No, I haven't, but I did hear evidence earlier today that suggests maybe a phase-in might be appropriate.

- Q. And can you please turn to page 35 of your direct testimony?
  - A. (Witness complies.)

2

3

4

5

8

9

19

- Q. And could you please read the sentence on line 5 that begins "The resulting"?
- A. "The resulting increase to other classes, on average, would be minor."
  - Q. And is it your position that an increase to the LGS class of \$43.4 million is minor?
- A. I was referring to other classes, on average, in that statement, and whether or not that would be minor to any particular class would depend on what you're comparing it to, if you're looking at their transmission rates--excuse me--their transmission charges only for the total bill, a host of factors.
- 17 Q. So you would agree that's not a minor shift 18 in transmission charges to the LGS class?
  - A. I'm sorry. Did you say it was 43 million?
- 20 Q. I have 43.4 million.
- A. A \$43 million increase to this component of their bill, which would be 112 million, on average, would be a relatively large percentage of that bill component.
  - Q. And you footnote that statement at

- Footnote 37; correct?
- A. When you say "that statement," you mean the sentence at lines 5 and 6?
  - Q. Correct.
  - A. Yes.

1

4

5

9

10

11

14

15

16

17

18

19

20

21

22

23

24

25

- 6 Q. And--
- 7 MR. CALLISTO: Strike that. No further 8 questions.
  - BOARD MEMBER WAGNER: Mr. Stephens, you mentioned that earlier there was a discussion of a phase-in of a 12-CP allocation.
- How would you--or what would be your preference on how that were to occur?

THE WITNESS: In that circumstance I think it would be up to the Board to determine what a proper phase-in period would be, but if we concede, for the sake of discussion, that that's a three-year period, then what I would recommend is for the rate RTS charges, the first effect as a result of this case, which would be January 1st of 2020, would be moved 33 percent of the way from the current charges to the cost-based charges of 12-CP. Then in the following year, in a three-year phase-in, they would be moved 50 percent of the way of the remaining distance to cost-based charges under a 12-CP

allocation, and then in the third year they would be moved the final way to 12-CP allocation.

One open question that I would want to give some more thought about is whether it would be necessary to recalculate the 12-CP allocator each year versus using the 12-CP allocator that is determined in this case, and I believe that it would be most accurate and most cost-based to recalculate it each year and move a third of--or the remaining way, whichever, toward the new 12-CP allocation because that best reflects the costs that are imposed on IPL through transmission charges from MISO.

If necessary, you wouldn't have to update it every year for the 12-CP allocator.

BOARD MEMBER WAGNER: And is three years the right number, or should it be four, five, 10?

THE WITNESS: Three years is very often used for phase-ins, and I think that would certainly be reasonable. If the Board felt it necessary to extend it a little further, I can't say, as I sit here, that it would be unreasonable. However, I do share Mr. Davison's concern that if you string it out too long, you end up with cost subsidies being in place for longer than necessary.

BOARD MEMBER WAGNER: But it sounds like

- 1 | whatever the period is, you would do it equally in
- 2 each of those periods. So, for example, four years,
- 3 | it would be 25 percent per year, or as you mentioned,
- 4 | three years, it would be 33 percent per year,
- 5 although one of those years would have to be more
- 6 | than 33 percent.
- 7 | THE WITNESS: Generally, yes. If the Board
- 8 | had a reason why it needed to moderate rates a little
- 9 differently because the 12-CP allocator changed that
- 10 | much in that given year, the Board may need to
- 11 | moderate rates a little differently, but as a
- 12 guideline, equal movement for each of the years in
- 13 | the phase-in period.
- 14 BOARD MEMBER WAGNER: All right. Thank you.
- 15 CHAIRPERSON HUSER: Mr. Frank?
- 16 MR. FRANK: Thank you, Your Honor. Just a
- 17 | couple of questions.
- 18 REDIRECT EXAMINATION
- 19 BY MR. FRANK:
- 20 Q. Mr. Stephens, you were asked a question
- 21 | about Table 5 on page 34 and the movement of costs
- 22 between the classes.
- 23 Is it ADM's intent to shift costs to other
- 24 | classes?
- 25 A. No, of course not. ADM's desire, as I

- understand it, and certainly my interest as a consultant on cost of service, is to try to achieve cost-based rates. If that means that resulting rates are significantly higher for any class, that's an indication of how far from cost they are presently.
- Q. And then one additional question regarding the phase-in approach if we were to move to a 12-CP allocation.

As I understand it, that's a way of mitigating the impact on other customer classes from moving to a 12-CP allocator.

- A. Yes, as opposed to a flash-cut movement.
- Q. Could that be handled either through phasing in the 12-CP allocator or could it be done through a phase-in of the changes in revenue allocation, and do you have a preference as between the two?
- A. I think that in this case it could probably be done through the rider RTS changes each year, and so you don't redo a revenue allocation for the entire case in each year, but RTS charges are reset each year, and if the utility is given a goal of reach cost of service based on 12-CP for transmission charges over a three-year period, for example, in equal increments, they can then take that information and move the third step the first year, a 50 percent

```
step the next year of the remaining, and then the
1
    remaining the final year. I'm confident IPL could
2
3
    calculate that.
4
             MR. FRANK: Thank you, Mr. Stephens.
5
             Your Honor, that's all I have.
6
             BOARD MEMBER WAGNER: Mr. Stephens, I
7
    apologize for coming back with another question.
8
              In a conversation you just had you mentioned
9
    resetting the RTS each year. Is that in the
10
    hypothetical example that you were describing or is
11
    there currently a plan to reset the RTS each year?
12
             THE WITNESS: The RTS charges get reset each
13
    year currently, but it's not to update due to
14
    allocations, and consequently, this would be a step
15
    in the RTS where instead of going all the way to cost
16
    of service in one flash-cut year, you tell IPL to do
17
    it over three steps, for example.
18
             BOARD MEMBER WAGNER:
                                    Okay.
                                           Thank you.
19
             CHAIRPERSON HUSER: The witness may step
20
    down.
21
             THE WITNESS:
                            Thank you.
22
                                     (Witness excused.)
23
             CHAIRPERSON HUSER:
                                  Ms. Tipton?
24
             MS. TIPTON: DAG calls David Berg.
25
```

|    | 718  |
|----|--|
| 1  | DAVID BERG,  |
| 2  | called as a witness by Counsel for the Decorah Area  |
| 3  | Group, being first duly sworn by Chairperson Huser,  |
| 4  | was examined and testified as follows:               |
| 5  | CHAIRPERSON HUSER: You may be seated.                |
| 6  | Ms. Tipton.  |
| 7  | MS. TIPTON: Thank you, Your Honor.                   |
| 8  | DIRECT EXAMINATION                                   |
| 9  | BY MS. TIPTON:                                       |
| 10 | Q. Mr. Berg, are you the same David Berg that        |
| 11 | filed direct and surrebuttal testimony in this case? |
| 12 | A. Yes, I am.  |
| 13 | Q. Along with exhibits attached to that              |
| 14 | testimony?   |
| 15 | A. Yes.  |
| 16 | Q. Your testimony and exhibits have been spread      |
| 17 | on the record by stipulation.                        |
| 18 | Do you have any corrections or additions to          |
| 19 | make to your testimony?                              |
| 20 | A. No, I do not.                                     |
| 21 | MS. TIPTON: With that, we would tender               |
| 22 | Mr. Berg for cross.                                  |
| 23 | MR. CALLISTO: IPL is listed as cross, and            |
| 24 | we withdraw that request.                            |

 ${\sf MS.}$  TIPTON: Your Honor, if I may, yesterday

- the Board had questions for Dr. Martin-Schramm that 1 related to the waterfall exhibit, IPL Exhibit 4, and 2 3 also to the LGS supplemental rate issue, and those were referred to Mr. Berg, so if the Board has 4 5 additional questions or clarification that you need, 6 he's here to respond. 7 BOARD MEMBER LOZIER: Mr. Berg, I have just 8 a few questions that I want to explore with you. 9 On pages 6 and 7 of your testimony you talk 10 about how the proposed rates punish Luther College. 11 And would you describe in more detail how that 12 punishment is done? 13 THE WITNESS: Yes. There's several ways I 14 could go about this. One of the easy ways might be 15 if I could specifically get up on the screen my 16 Exhibits--I'm pretty sure it's 1 and 2 from my direct 17 testimony, which is the tariffs--the proposed tariffs 18 for both the LGS and the LGS Supplemental. And what 19 would really be great -- I don't know if they can get 20 the first page of each side by side. Is that possible? 21 BOARD MEMBER LOZIER: She says no. THE WITNESS: She said no. Okay. 22 23 we'll need the first page of each and switch back and
  - Now, relative to what they're doing with

forth. How about that?

24

regard to the rates--so we have the LGS class
and then we have the LGS Supplemental class, so
Luther College is part of the LGS Supplemental class
because they have behind-the-meter generation. They
have a solar facility on their campus, and so that
based on the way the rate schedules are set up,
Luther College is in that Supplemental class.

Now, one of the arguments that I made in my direct testimony is from a cost-of-service basis, I don't believe they should be treated any differently. Luther College doesn't export any of that energy onto the grid. They absorb it all within the campus.

So, quite frankly, from a cost-of-service perspective, self-generating solar behind the meter is really no different than turning off the lights. It reduces your net load. In fact, I have figures in my direct testimony relative to how much energy conservation Luther has done, which far exceeds the amount of energy that they generate relative to their solar facility.

When you look at the rates--and I'm not going to go certainly through all of them, but there are a couple of things to me that are very interesting and, quite frankly, as a cost-of-service expert, I can't figure out how it can be justified.

So right now we are looking at--and basically what you can see is you can see both the existing and the proposed rate when you look at what's up on the screen, and I would like to focus on the non-time-of-day option. So within both the LGS and the LGS Supplemental, IPL has a time-of-day option and a non-time-of-day option. So currently Luther is receiving service under the non-time-of-day option. So this is the regular LGS rate.

So let's just look at those winter and summer. So you see the non-time-of-day option.

Let's look at the energy rates. So you can see that the winter energy rate--this is the regular LGS--goes from 1.253 cents up to 1.43 cents. So they are increasing the winter rate of the regular LGS.

But then let's look at the summer rate for the regular LGS. That's actually decreasing from 2.301 cents down to 1.971. Now, we're just talking about summertime energy here. So, you know, energy, when you look at a non-time-of-day basis and you look at energy from the energy market, it's a fairly homogenous product relative to sales to LGS versus LGS Supplemental customers, in my opinion.

So just again, we've got an increase in the winter energy rate, and actually a decrease in the

summer energy rate for regular LGS.

Now, if we could switch to the first page of my second exhibit.

Now let's look at the energy rates for the LGS Supplemental on the non-time-of-day option. We see an increase in the winter rate, which is actually more than the increase in the winter rate on the regular.

Now, you recall on the regular rate, the summer energy rate was actually going down. Now, go back, if you would. Look at what's happening to the summer energy rate for the supplemental. It's going from 2.192 cents up to 2.861 cents. We now have a 45 percent differential in the summer non-time-of-day energy rate between the Supplemental class and the regular class in this rate class. These aren't particularly different.

If you look at the cost-of-service analysis from IPL, and in particular in Vognsen's testimony, you'll notice in cost of service they don't differentiate between the on- and off-peak and the non-time-of-day options. They only differentiate between the regular LGS and the Supplemental LGS.

Maybe we could bring up--it's in Vognsen's direct testimony. I believe it's Table 4 on page 10.

Actually, I think-- Excuse me. It's on page 48.

So this is results of their test-year 2020 cost of service by class. Notice that the large general service--and he's got an increased justified in the far right column. The large general service is showing an increase of \$23 million. The large general service supplementary is actually showing a decrease of 63,000. So relative to their cost-of-service results between large general service and large general service supplemental, very different results in their cost of service in that they're showing LGS regular should be going up more than LGS Supplemental.

When you compare what they're doing to the time-of-day rates between the two, the differences are similar, how they're treating LGS and LGS Supplemental. They're making a change in how they're treating the Supplemental on the non-time-of-day basis.

Now, again, there's no difference in the cost of service relative to time of day and non-time-of-day, so we wonder what the basis of that is.

If we could, I would like to go also, then-I need to look. It's in Vognsen's--I believe it's in

his rebuttal testimony. Yes. So Vognsen rebuttal testimony, if we could go to page 41, please.

So part of his rebuttal testimony I think was taking issue with some of my comments in my direct about this change. So you'll notice on line 6 it says, "The pricing differentials between the LGS and LGS Supplementary groups simply reflect the revenue impacts of interruptible credits and time of use."

Then if we go on to the next question, it says, "How did interruptible credits impact the pricing differential?"

He comments that, "In Docket"--I'm not going to read the whole docket, but in the Board's final order in March of 2019, IPL's interruptible credit levels were reduced.

He basically goes on to say that because of that reduction, which was approved by the Board, of those interruptible credits, it's changing a balance, and what it appears is that they're trying to fix the change of the interruptible credit, which is a demand-related credit, by hitting the non-time-of-day supplemental customers with an exorbitant energy increase to make up for that, and I don't think those two things should be mixed.

Actually, then if we go to the next page of this testimony, page 42, you'll notice that starting at line 7, he says, "The proposed rate design encourages greater participation of LGS Supplementary customers in these programs. Utilizing rate design to encourage greater participation in time-of-use and demand response rate options, such as interruptible programs, is a legitimate rate design objective."

It appears to me that they want to move

It appears to me that they want to move people from the non-time-of-day option to the time-of-day option. Rather than eliminating that option through this proceeding, they're making the non-time-of-day option from supplemental customers so egregious that they will have no choice but to make that move, and that's not a cost-based decision, and I don't think that it's correct.

BOARD MEMBER LOZIER: Well, that was quite an answer to what I thought was a fairly simple question. Thank you.

So you also indicate that the rate will discourage other similar customers from investing in distributed generation.

Does your same analysis apply to other customers, as well as to Luther College?

THE WITNESS: Well, what this really goes

to, to my feeling, is the fact that the Supplemental exists at all, because I can't envision how Luther College or any other Supplemental customer who has behind- the-meter generation that never exports onto the system impacts the cost to serve as a class.

Now, they make comments about these customers participate in these programs more or less than others. Well, then, that should be taken care

customers participate in these programs more or less than others. Well, then, that should be taken care of in the programs. For instance, the interruptible credit. Well, that should be taken care of in the interruptible credit, not in the regular rate to sort of double reward people who participate in the interruptible credit as opposed to those who don't.

BOARD MEMBER LOZIER: Thank you.

You state also that you believe that the rate increase proposed by IPL is inconsistent with state law, and you refer to a specific statute.

Could you explain how you believe that statute is applicable to what they're doing?

THE WITNESS: Well, I think I want to maybe rephrase your interpretation of what I said.

BOARD MEMBER LOZIER: All right.

THE WITNESS: I'm not making any legal interpretations in my testimony. What I really was saying is that they're discouraging renewables

through this rate schedule and that Iowa is renowned 1 2 as a state that is interested in renewables. 3 just as an example of a statement I make reference to 4 that. I'm certainly not here to say they're doing 5 anything illegal. I'm basically saying by having 6 this rate differential, which is a discouragement 7 against having supplemental renewable energy generation behind the meter, is against the goals the 8 State of Iowa has. 9 10 BOARD MEMBER LOZIER: Okay. Thank you for 11 that clarification. 12 We had a discussion yesterday with 13 Dr. Martin-Schramm about the CEA study that was 14 produced just prior to the municipalization vote in 15 Decorah. 16 To your knowledge, did IPL ever disavow the 17 conclusions of CEA with respect to the projected rate increase over three years? 18 THE WITNESS: No. they certainly did not. 19 20 In fact, I was actually involved in that. I was 21 actually part of the team that did the feasibility study for the Decorah Group, and so I was at public 22

meetings, and in fact was at the public meeting in

Advisers presented the results, and there was a

city hall when a representative of Concentric Energy

23

24

```
number of IPL people in the room, and oftentimes sort
1
2
    of in public statements IPL stood behind the CEA
3
    analysis. So they had ample opportunity to disagree,
4
    and never did.
             BOARD MEMBER LOZIER: In Exhibit 4 to your
5
6
    direct testimony you have a table that shows the
7
    disparity in rates between Interstate Power and
8
    MidAmerican Energy, and just looking at some of those
9
    numbers, for example, in 2008--and this is the price
10
    per kilowatt-hour, I take it. It's 11 cents for
11
    Interstate Power and eight cents for MidAmerican.
                                                        So
12
    by my math, Interstate Power is a 37-and-a-half
13
    percent increase over MidAmerican; correct?
14
             THE WITNESS: Your math feels right to me.
15
             BOARD MEMBER LOZIER: Okay. I divided three
16
    by eight.
17
             Then in 2015, it's 14 cents compared to
18
    10 cents, which I take it to be a 40 percent increase.
19
             THE WITNESS:
                            Correct.
20
             BOARD MEMBER LOZIER: In 2016, 15 cents to
21
    10 cents, a 50 percent increase; and in 2018, 16 cents
22
                                         So the disparity
    to 10 cents, a 60 percent increase.
23
    in rates is increasing over the last 10 years.
24
    that your understanding?
```

THE WITNESS: Yes; and certainly the graph

- 729 at the top of this exhibit also shows that visually 1 2 for people who may not be as numerically inclined. 3 BOARD MEMBER LOZIER: Okay. Thank you. Ι 4 have no further questions. 5 CHAIRPERSON HUSER: Ms. Tipton? 6 MS. TIPTON: I don't have anything for 7 Mr. Berg. CHAIRPERSON HUSER: Seeing nothing further, 8 9 the witness may step down. 10 THE WITNESS: Thank you. 11 (Witness excused.) 12 CHAIRPERSON HUSER: Mr. Schmidt, you may 13 call your first witness. 14 MR. SCHMIDT: IEC calls Kerri Johannsen to 15 the stand. 16 KERRI JOHANNSEN, 17 called as a witness by Counsel for the 18 Environmental Intervenors, being first duly sworn by Chairperson Huser, was examined and 19 20 testified as follows: 21 DIRECT EXAMINATION BY MR. SCHMIDT: 23
- 22

25

Q. Ms. Johannsen, did you cause to be filed in this case prefiled direct testimony and prefiled rebuttal testimony and accompanying exhibits?

A. Yes.

- Q. And since the time the testimony was prefiled, do you have any changes, updates, or corrections?
  - A. I do not.
- Q. And if you were asked the same questions today, would your answers remain the same?
  - A. Yes.

MR. SCHMIDT: With the understanding that the witness's testimony and exhibits have been entered into the record, Ms. Johannsen is available for questions.

BOARD MEMBER LOZIER: Ms. Johannsen, on page 7 of your testimony you refer to your concern about monopoly encroachment into the private market, and you suggest that utility programs should be focused on markets that are not otherwise well-served.

Would you describe what kind of programs you're talking about with respect to that?

THE WITNESS: Sure. The kinds of programs we're thinking about here are things like low-income community solar programs. Community solar in general can be a customer solution that's not otherwise provided for folks who live in apartment buildings,

for example.

We also think that there is a place for utilities to use non-wires alternative analyses to create cheaper solutions on the grid for things that might otherwise be required in terms of upgrades.

BOARD MEMBER LOZIER: Is it your view that the Board has authority to direct utilities to undertake those programs?

THE WITNESS: I don't know the answer to that.

BOARD MEMBER LOZIER: Well, an alternative would be for the Board to respond to that type of program that a utility might bring to the Board.

THE WITNESS: Yes. I think that, you know, we did include this as part of the settlement agreement, as part of an overall settlement of these issues. However, one thing that was important for us to include in the settlement agreement was a robust stakeholder process where we want to continue to discuss with IPL changes to these programs in the future that ensure that these are focused in the right areas.

BOARD MEMBER LOZIER: Okay. Thank you. I have no further questions.

CHAIRPERSON HUSER: Ms. Johannsen, would you

```
please turn to your rebuttal testimony, page 2,
1
2
    lines 8 through 10?
3
             THE WITNESS:
                            Okay.
4
             CHAIRPERSON HUSER: Will you help me
5
    understand what you think the Board should require?
6
             THE WITNESS: Here I think it's important
7
    that the staff at IPL--what my testimony was saying--
8
    and this is an issue that was part of the settlement
9
    agreement. What my testimony was addressing here was
10
    ensuring that the IPL staff who might be dealing
11
    with intakes in terms of interconnection agreements,
12
    et cetera, would not necessarily be the same staff
13
    who are talking to customers about the options they
14
    have available for utility programs.
15
             CHAIRPERSON HUSER: Can you tell me where in
16
    the settlement agreement this issue is addressed?
17
             THE WITNESS: Well, the Environmental
    Intervenors, as part of the settlement agreement,
18
19
    agreed to withdraw our objections to the renewable
20
    energy programs as proposed by Alliant.
21
             CHAIRPERSON HUSER: Ms. Johannsen, are you
22
    familiar with the legislative process?
23
             THE WITNESS: Yes.
24
             CHAIRPERSON HUSER: And does that experience
25
    give you the ability to have an opinion as to whether
```

or not you know who is lobbying on behalf of certain 1 2 legislation? 3 THE WITNESS: I have worked up at the 4 legislature for the last couple of legislative 5 sessions, and in my memory, I probably would have some information about who was lobbying on what 6 7 pieces of legislation, yes. CHAIRPERSON HUSER: Are you familiar with 8 9 the legislation for energy efficiency programs? 10 THE WITNESS: Yes. 11 CHAIRPERSON HUSER: Can you tell me what 12 parties lobbied on behalf of that legislation? 13 THE WITNESS: I cannot give you a 14 comprehensive list of the parties that were lobbying 15 on behalf of Senate File 2311. It is my recollection 16 that generally the utilities were supportive of that 17 legislation. CHAIRPERSON HUSER: Is it accurate to state 18 19 that you were probably not supportive of that 20 legislation? 21 THE WITNESS: We were very much opposed to that legislation. 22 23 CHAIRPERSON HUSER: So you're kind of 24 unbiased because you're opposed, the other parties 25 were in favor of it. Who did the legislators think

1 that that legislation would benefit? THE WITNESS: I think that is a very 2 3 complicated question, and I think that there was a 4 representation that the legislation would benefit 5 customers. I think that we disagreed with that 6 representation. I cannot speak to what legislators 7 believed or did not believe. CHAIRPERSON HUSER: Did you believe that the 8 9 legislation would reduce customer bills? 10 THE WITNESS: No. 11 CHAIRPERSON HUSER: Mr. Schmidt, do you have 12 any redirect? 13 MR. SCHMIDT: I do not. 14 MR. CALLISTO: Your Honor, I just have one 15 question, if I may. 16 CHAIRPERSON HUSER: You're pretty good in 17 doing that. Mr. Callisto. 18 CROSS-EXAMINATION 19 20 BY MR. CALLISTO: 21 Q. Ms. Johannsen, in response to a question 22 from the Board Chair concerning your testimony at 23 page 2, lines 8 through 10, I believe it's your 24 direct--excuse me--your rebuttal testimony, you

raised a concern about cross-subsidization and the

- ability of the utility to improperly, through that process, influence nonregulated entities; correct?
- Α. That was the general concern, yes, addressed in my testimony.
- And as you indicated, these tariffs, in particular, have been settled, and you're one of the settling parties on that; correct?
  - Α. Yes, we are.

2

3

4

5

6

7

8

11

15

16

17

18

21

22

23

24

- 9 Q. And you are aware--or are you aware of 10 Iowa Code Section 476.78 which prohibits crosssubsidization, specifically, "A public utility shall 12 not directly or indirectly include any costs or 13 expenses attributable to providing non-utility 14 service in regulated rates or charges"?
  - It is not my understanding that this would Α. be part of IPL's competitive--it was my understanding these programs would be under the regulated utility and not part of IPL's competitive entity.
- 19 Q. Correct. The statute I just read applies to 20 a public utility, which is IPL.
  - Do you understand that?
  - Α. Can you read the statute for me again?
  - Q. I'll read it to you again.
  - "A public utility shall not directly or indirectly include any costs or expenses attributable

- 1 to providing non-utility service in regulated rates
  2 or charges."
- So we agree, first of all, that what we're talking about with these tariffs are regulated services?
- 6 A. Right.
- 7 CHAIRPERSON HUSER: Mr. Callisto, we're 8 going to pull it up so she can see it.
- 9 MR. CALLISTO: Sure.
- 10 THE WITNESS: Okay.
- 11 | BY MR. CALLISTO:

15

16

17

18

- Q. So we agree that what IPL has asked for here and what the settling parties have agreed on is a utility service provided pursuant to tariff; correct?
  - A. Correct.
  - Q. And then what this statute prohibits is any cross-subsidization of any nonregulated parts--excuse me--prohibits the utility from subsidizing nonregulated activities?
- 20 A. Right.
- Q. And so with your understanding of the statutory limits on cross-subsidization, do you still have concerns?
- A. I'm not a lawyer, but I do not think
  that this particular statute applies to this

```
particular situation. I think our concern about
1
2
    cross-subsidization is both between the customers
3
    participating in this program and the customers
4
    who choose not to participate. That's the
5
    cross-subsidization issue.
6
             There's also an issue with private market
7
    actors, such as independent solar companies, competing
8
    with the public utility.
9
             So I'm not concerned about cross-subsidization
10
    between the regulated and nonregulated parts of the
11
    utility, which I think is what this statute is
12
    referring to.
13
             MR. CALLISTO: No further questions.
14
             CHAIRPERSON HUSER:
                                  Mr. Schmidt?
15
             MR. SCHMIDT: No further questions.
16
             CHAIRPERSON HUSER: Ms. Johannsen, you may
17
    step down.
18
                                     (Witness excused.)
19
             CHAIRPERSON HUSER:
                                  Mr. Callisto, do vou
20
    believe that there is any more public testimony that
21
    is to be provided today?
22
             MR. CALLISTO: The only issue, if the
23
    Board is going to--if the Board's request is that
24
    Mr. Vognsen speak about the tariff concerning new
25
    customers, new large industrial customers, I think
```

```
1
    what he is going to be able to say can be said in
2
    open session.
3
              If there's things beyond that issue that the
4
    Board believes you need to hear from him in closed,
5
    we should perhaps make sure it is a closed session.
6
              CHAIRPERSON HUSER: Ms. McConnell, do you
7
    have it?
8
              If all of the parties would please put their
9
    attention on the screen or wherever you have what we
10
    have on the webinar up.
              October 2019: Settlement conference
11
12
    scheduled for October 11th; objections to the
13
    settlement, October 15th; responses to objections on
14
    October 18th; surreplies on October 23rd; expected
15
    transcript sometime the week of the 4th; initial
16
    briefs due the 12th; reply briefs due the 18th.
17
              Somewhere in there we've got four other
18
    hearings in the gas case, but other than that, how
    does that fit for all of the parties?
19
20
             Mr. Callisto?
21
              MR. CALLISTO: May I just have one moment,
    Your Honor?
22
23
              CHAIRPERSON HUSER: Yes.
24
              (Pause.)
25
             MR. CALLISTO: We're fine with that.
```

CHAIRPERSON HUSER: Ms. Easler? 1 2 MS. EASLER: That's fine. 3 CHAIRPERSON HUSER: And everyone else just 4 nod your head. If you have an objection, tell me 5 that. 6 (No response.) 7 CHAIRPERSON HUSER: All right. We believe 8 we'll have an order out--probably not today--9 tomorrow, and that order will have all of these 10 dates. The order will also have the initial briefs 11 12 date due, and then you're probably going to see an 13 additional order sometime in about a week and a half 14 after we've determined what additional information we 15 are going to require you to file in your initial 16 briefs related to both the settlement and those 17 unsettled issues. 18 We were hoping to provide that to you today, 19 but that's not going to happen. 20 So the intent now is to move into closed 21 session. Mr. Vognsen and Mr. Michek will be the only 22 witnesses, I'm aware of, for closed session. 23 MR. CALLISTO: Your Honor, I just wanted to 24 make sure we're on the same page with Mr. Vognsen. 25 The information that he can give on the ICR, the

- Individual Customer Rate Tariff, is not confidential, 1 2 so he can't speak to specific customers. He can 3 speak generically about the opportunity that IPL sees, and he can do that in open, if that is the 4 5 topic that you wanted to talk to him about. I wasn't 6 aware of any other one. That one he can address in 7 the open. CHAIRPERSON HUSER: He can tell us the 8 9 customer? 10 MR. CALLISTO: He cannot. 11 CHAIRPERSON HUSER: Can he tell us the customer in confidential? 12 13 MR. CALLISTO: He does not know the name of 14 the customer. It's my understanding that the 15 business unit at IPL has the name of the customer. 16 There is great concern about the release of the name 17 of the customer for competitive reasons. only competitor to competitor in that industry; it is 18 19 competitor to competitor in the utility space to the
  - Mr. Vognsen, himself, does not know the name of that customer, but he can give the general contours of what some of those conversations have

extent that they may have an interest in going into

another utility's territory, and so IPL has great

concern about sharing that name.

20

21

22

23

24

been to inform you on your interest in the kind of 1 2 customer that would be attracted by this tariff. 3 CHAIRPERSON HUSER: Mr. Callisto, did vou 4 already give us the five-year? 5 MR. CALLISTO: We have not. We would like 6 to give that to you, and that is a closed-session 7 item. CHAIRPERSON HUSER: And who is that? 8 MR. CALLISTO: Mr. Michek. 9 10 CHAIRPERSON HUSER: The Board is going to 11 take a 15-minute recess and have a conversation about 12 the ICR issue, but who here is not staying for the 13 closed session? 14 Okav. So it is our intent to move into 15 closed session. We do not intend to-- We're going 16 to recess first. We'll be back. You need to stick 17 around. 18 The Board will recess, and we'll be back around 2:15 or when all three Board Members have 19 20 returned. 21 (Short recess.) 22 CHAIRPERSON HUSER: For the information of 23 the parties, we are going to continue in public 24 session for as long as we can.

DAVID VOGNSEN, 1 2 recalled as a witness by Counsel for Interstate Power 3 and Light Company, having been previously duly sworn 4 by Chairperson Huser, was examined and testified as 5 follows: 6 CHAIRPERSON HUSER: We have requested 7 Mr. Vognsen to come back to the stand. 8 understands, and will state the same, that he has 9 previously been sworn in. 10 THE WITNESS: Yes. 11 CHAIRPERSON HUSER: Board Member Wagner. 12 BOARD MEMBER WAGNER: Mr. Vognsen, I just 13 want to go through a couple of clarifications from 14 the conversation yesterday on the ICR tariff. 15 Does IPL plan to file a class cost-of-16 service study for each customer that would seek 17 service under the ICR tariff? 18 THE WITNESS: We would definitely need to 19 run a class cost-of-service study for them being 20 broken out as a separate customer in order to 21 determine if the pricing was appropriate. You know, 22 we would be more than happy to file that as part of 23 the annual filing too. BOARD MEMBER WAGNER: And in a contract with 24 25 an ICR customer, would their rates be subject to

```
changes in a future rate case?
1
2
              THE WITNESS: Yes.
                                  Because they're broken
3
    out into a separate class, then they would be
4
    evaluated along with all the other classes.
5
              BOARD MEMBER WAGNER: So it's not the intent
6
    that if you have, say, a five-year contract, that
7
    those rates are set and they can't be changed by a
    rate case?
8
9
              THE WITNESS:
                            Right.
10
              BOARD MEMBER WAGNER: Were you in the room
11
    earlier today for a discussion with Mr. Davison from
12
    the OCA and Mr. Stephens from--I don't know where--
13
    Mr. Stephens --
14
              THE WITNESS: ADM.
15
             BOARD MEMBER WAGNER: ADM. Excuse me.
16
    Thanks.
17
             Were you in the room for those?
18
              THE WITNESS: Yes.
19
              BOARD MEMBER WAGNER: Do you have any
20
    general thoughts, comments, anything regarding their
21
    testimony on 12-CP and phase-in, potential phase-in,
22
    or doing AED each year, any of those topics?
23
              THE WITNESS: First of all, I still
24
    think there was adequate support in the prior
```

docket for the continuation of the AED allocator

```
744
    for transmission, so I still support the AED
1
2
    allocation for transmission.
3
              On the other issue, though, as far as when
    we update our RTS factor, I see no issue with updating
4
5
    the AED allocator for transmission in association
6
    with that.
7
             BOARD MEMBER WAGNER: And that would be on
8
    a - -
9
             THE WITNESS: Yeah, we would file that in
10
    October for rates effective the following January.
11
              BOARD MEMBER WAGNER: And no comments on if
12
    the Board were to determine a phase-in of 12-CP,
13
    anv--
              THE WITNESS: I don't think we would want to
14
15
    support that.
16
              BOARD MEMBER WAGNER: Any thoughts on a
    number of years, if it were to happen?
17
18
              THE WITNESS:
                            Fifty.
19
              BOARD MEMBER WAGNER: Fair enough.
20
              I think that's all the questions I have.
21
    Thank you.
22
             CHAIRPERSON HUSER: Your response seems to
23
    indicate that it's not required that you file that
    class cost of service on the ICR. Help me understand
24
```

why you wouldn't have to file that.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

to a customer.

THE WITNESS: Well, we would file it as part of a rate proceeding, you know, the class cost of service showing them broken out, because that would a requirement, but I mean as far as like an informational requirement as part of the annual filings that I talked about yesterday, I mean if that was a condition of the ICR, we would not have any issue of including that with the annual filing when we offer the ICR to a customer to support the rate. CHAIRPERSON HUSER: So is it your position that you could begin using this tariff after it was approved without having a cost-of-service study? THE WITNESS: Well, before we could offer the rate to the customer to determine -- to make sure there's no subsidies in the rate, we would have to run a cost of service breaking them out into their own class to determine if the rate was appropriate. CHAIRPERSON HUSER: And all of that would require Utilities Board approval? THE WITNESS: I don't necessarily think we would need the approval prior to offering it to the Similar to flexible pricing, we do not get customer. prior Board approval when we offer flexible pricing

CHAIRPERSON HUSER: But this isn't a

flexible pricing proposal.

THE WITNESS: That's correct.

CHAIRPERSON HUSER: So then what parameters or situations are you applying to it that you're utilizing the flexible rate provisions?

THE WITNESS: Yeah. I'm using the filing requirements of the flexible rate provisions because that would really be the alternative. If we did not have an ICR rate, we could use the flexible pricing provisions.

CHAIRPERSON HUSER: And that was one of the reasons--maybe not very eloquently--that we brought up the MidAmerican tariff that outlines the three pages of different information that the Board requires, and in that conversation did you understand that I was asking if you knew--if IPL would be in agreement with all of the provisions that were applicable and that you would follow them?

THE WITNESS: Yes. I mean I would agree to providing the same information that MidAmerican would be providing because, you know, for example, they may be able to offer the ICR rate to a customer located in their service territory, and, you know, we don't want to be at a competitive disadvantage to MidAmerican in not being able to offer a similar type

of rate.

CHAIRPERSON HUSER: With the same provisions that are set out in the MidAmerican tariff?

THE WITNESS: Yes.

CHAIRPERSON HUSER: And you understand that there are a number of filings that are confidential and not filed as a public record related to that?

THE WITNESS: Yes. For example, flexible pricing, when we file like the contracts on the gas side, those are filed as confidential.

CHAIRPERSON HUSER: Mr. Callisto?

## REDIRECT EXAMINATION

## BY MR. CALLISTO:

- Q. Just to make sure we're clear with the Board, Mr. Vognsen, the Board has what I believe would be MidAmerican's comparable tariff, and please let us know--I believe, off memory, that, for example, the capacity figure that IPL is seeking is different than MidAmerican's, so if you could just walk through the pieces that you're aware of that are different so that if in the event the Board approves this tariff request, it will have any nuances to it that are different than what MidAmerican has, assuming that it meets the Board's approval.
  - A. Yes. Following up on that, they have

- 1 | 15,000 kW for 12 consecutive months. We have
- 2 25,000 kW for 12 consecutive months. We have also
- 3 | the requirement that they would be served at a
- 4 transmission voltage.
- 5 Let's see. Yeah, we have the same provision
- 6 | as far as if they terminate the ICR, they would have
- 7 | to take advantage of whatever alternative rate they
- 8 qualified for.
- 9 Yeah, and again, under the IUB review and
- 10 approval, the rates, riders, terms, and conditions
- 11 | applicable to the rider ICR are subject to
- 12 | modification by the IUB or any other agency that has
- 13 jurisdiction.
- 14 So I agree with that provision.
- 15 Q. So I understand you to say that you're
- 16 | effectively fine with the substantive provisions of
- 17 | the MidAmerican tariff, with the exception of the
- 18 | capacity figure, which is 25,000 kW, and the request
- 19 | that IPL's tariff be taking service at a transmission
- 20 | level?
- 21 A. I think they both require transmission.
- 22 Q. I'm sorry. That's the exception I'm looking
- 23 | at, the termination one. So they're both going to be
- 24 | at transmission.
- So the only difference, then, is the

7

9

10 for reference purposes.

11 Is there any objection?

12 MR. CALLISTO: None.

13 CHAIRPERSON HUSER: Thank you. The hearing exhibit is admitted. 14

15 (Board Hearing Exhibit 4 was

16 received in evidence.)

CHAIRPERSON HUSER: Are there any further 17 18 questions for Mr. Vognsen?

19 (No response.)

> CHAIRPERSON HUSER: It is not our intent to take him into closed session -- confidential session.

> > You may step down.

23 Hold on.

20

21

22

24 (Pause.)

25 CHAIRPERSON HUSER: Mr. Vognsen, you can go.

```
I was just making sure that I'm on the right page.
1
2
                                     (Witness excused.)
3
              CHAIRPERSON HUSER:
                                  Ms. McConnell, pull up
4
    the calendar again. Again, we have the calendar.
5
              It is our intent at this point that
6
    Board Member Wagner is going to move for us to go
7
    into confidential session.
              It is the Board's intent that when we are
8
9
    done and move out of confidential session, that we
10
    will be adjourning the hearing and not taking any
11
    further action.
12
              Are there any questions from any of the
13
    parties?
14
              (No response.)
15
              CHAIRPERSON HUSER: Hearing none,
16
    Board Member Wagner.
17
              BOARD MEMBER WAGNER: I move to go into
18
    closed session pursuant to Iowa Code Chapter 21.5(c)
19
    and (f).
20
              BOARD MEMBER LOZIER: I second the motion.
21
              CHAIRPERSON HUSER: It's been moved and
22
    seconded to go into confidential session. Those in
23
    favor of the motion requires a roll-call vote.
24
              Chair Huser votes aye.
25
              Board Member Wagner?
```

# CERTIFICATE

I, the undersigned, a Certified Shorthand
Reporter of the State of Iowa, do hereby certify that
I acted as the official court reporter at the hearing
in the above-entitled matter at the time and place
indicated;

That I took in shorthand all of the proceedings had at the said time and place and that said shorthand notes were reduced to typewriting under my direction and supervision, and that the foregoing typewritten pages are a full and complete transcript of the shorthand notes so taken.

Dated at Des Moines, Iowa, this 28th day of October, 2019.

CERTIFIED SHORTHAND REPORTER

| \$   | 674:17, 683:13,<br>728:10   | <b>19</b> [3] - 584:22,<br>615:16, 615:21   | 663:23, 674:18<br><b>21.5(1)(f</b> [1] - 575:5   | <b>3:20</b> [1] - 751:10  |
|--|---|---|--|---|
|  | <b>111</b> [1] - 581:24   | <b>1946</b> [1] - 570:10  | <b>21.5(c</b> [1] - 750:18   | 4   |
| <b>\$10</b> [2] - 708:21,  | <b>112</b> [1] - 712:22   | <b>199</b> [1] - 622:11   | <b>22</b> [4] - 615:8, 626:17,   |   |
| 708:22   | <b>11:50</b> [1] - 704:7  | <b>1:00</b> [2] - 704:7, 705:1  | 626:18, 627:2  | 4 574.44 000.04   |
| <b>\$111</b> [1] - 691:15  | 11th [1] - 738:12   | <b>1st</b> [3] - 639:1, 663:17,   | <b>23</b> [1] - 627:2  | <b>4</b> <sub>[12]</sub> - 574:14, 626:21,  |
| <b>\$127</b> [1] - 636:14  | <b>12</b> [8] - 617:4, 619:25,  | 713:20  | <b>2311</b> [1] - 733:15   | 663:23, 674:16,   |
| <b>\$155</b> [1] - 691:16  | 643:10, 669:1,  |   | 23rd [1] - 738:14  | 690:8, 690:15,  |
| <b>\$180</b> [2] <b>-</b> 618:3, 619:1   | 686:23, 690:18,   | 2   | <b>24</b> [8] - 586:22,  | 690:25, 719:2,<br>722:25, 728:5,  |
| <b>\$203</b> [1] - 635:5   | 748:1, 748:2  |   | 626:18, 626:20,  |   |
| <b>\$23</b> [1] - 723:6  | <b>12-CP</b> [26] - 689:11,   | 0 045.44 074.47   | 626:21, 626:22,  | 749:6, 749:15   |
| <b>\$26,000</b> [1] - 698:17   | 689:14, 690:1,  | <b>2</b> [9] - 615:14, 674:17,  | 627:12, 627:13,  | <b>40</b> [1] - 728:18<br><b>408</b> [1] - 590:22   |
| <b>\$27</b> [3] - 693:12,  | 691:5, 691:17,  | 674:21, 683:13,   | 710:24   |   |
| 693:21, 693:24   | 692:3, 694:6,   | 698:12, 719:16,   | <b>25</b> [5] - 590:16,  | <b>41</b> [1] - 724:2   |
| <b>\$3.43</b> [4] <b>-</b> 697:18,   | 700:13, 700:18,   | 732:1, 734:23, 749:7  | 592:16, 594:6,   | <b>42</b> [2] - 642:16, 725:2   |
| 698:11, 699:4, 699:7   | 711:6, 711:22,  | <b>2.192</b> [1] - 722:13   | 615:13, 715:3  | <b>43</b> [1] - 712:19  |
| <b>\$37</b> [1] - 687:7  | 713:11, 713:22,   | <b>2.301</b> [1] - 721:18   | <b>25,000</b> [4] - 594:7,   | <b>43.4</b> [3] - 711:11,   |
| <b>\$43</b> [1] - 712:21   | 713:25, 714:2,  | <b>2.861</b> [1] - 722:13   | 748:2, 748:18, 749:1   | 712:9, 712:20   |
|  | 714:5, 714:6,   | <b>20</b> [10] - 590:1, 590:13,   | <b>26</b> [3] - 615:14,  | <b>431</b> [1] - 590:17   |
|  | 714:10, 714:14,   | 599:12, 615:13,   | 686:17, 686:19   | <b>442</b> [1] - 590:17   |
|  | 715:9, 716:7,   | 615:17, 667:12,   | <b>27</b> [1] - 710:13   | <b>45</b> [1] - 722:14  |
| 'billing [1] - 590:14  | 716:11, 716:14,   | 674:22, 687:18,   | <b>27-million</b> [1] - 693:15   | <b>46</b> [1] - 701:23  |
| 'high [2] - 590:15,  | 716:22, 743:21,   | 710:8, 751:7  | <b>27175</b> [1] - 571:18  | <b>47</b> [3] - 636:2, 697:24,  |
| 590:21   | 744:12  | <b>200</b> [3] - 570:3,   | 28th [1] - 774:13  | 698:9   |
| 'rates/charges' [1] -  | <b>12-day</b> [1] - 599:16  | 570:22, 571:15  | <b>29</b> [1] - 687:7  | <b>470</b> [1] - 590:19   |
| 590:15   | <b>12-month</b> [1] - 649:7   | <b>2000</b> [3] - 570:13,   | <b>2:15</b> [1] - 741:19   | <b>476.78</b> [1] - 735:10  |
| 'we [1] - 702:20   | <b>12th</b> [1] - 738:16  | 571:3, 571:21   | 2nd [1] - 710:16   | <b>48</b> [2] - 586:23, 723:1   |
| We [1] - 102.20  | <b>13</b> [3] <b>-</b> 630:3, 671:5,  | <b>20001</b> [1] - 570:20   |  | <b>481</b> [1] - 677:12   |
| 1  | 671:8   | <b>2001</b> [1] - 679:12  | 3  | <b>48377</b> [1] - 571:18   |
| 1  | <b>13-month</b> [3] - 630:11,   | <b>2008</b> [1] - 728:9   |  | <b>496</b> [1] - 590:19   |
|  | 630:12, 630:22  | <b>2010</b> [1] - 642:11  | 2.00 674.04  | <b>4th</b> [1] - 738:15   |
| <b>1</b> [13] <b>-</b> 574:10, 579:10,   | <b>1375</b> [1] - 570:8   | <b>2014</b> [1] - 590:13  | <b>3</b> [1] - 674:21  |   |
| 582:18, 582:20,  | <b>14</b> [3] - 619:1, 642:21,  | <b>2015</b> [3] - 590:16, 689:1, 728:17   | <b>3(G</b> [2] - 579:14, 579:15  | 5   |
| 583:1, 635:16,   | 728:17  | <b>2016</b> [7] - 590:17,   |  |   |
| 640:11, 674:17,  | <b>143</b> [3] - 587:14,  | 676:5, 676:11,  | <b>30</b> [2] - 642:8, 642:20  | <b>5</b> [16] - 581:22, 589:17,   |
| 674:18, 677:11,  | 588:5, 588:9  | 679:6, 679:17,  | <b>300</b> [1] - 571:11  | 635:17, 638:1,  |
| 677:16, 704:1,   | <b>15</b> [7] - 594:7, 642:21,  | 680:2, 728:20   | <b>3000</b> [1] - 569:12<br><b>30303</b> [1] - 577:25  | 674:17, 691:8,  |
| 719:16   | 643:9, 674:21,  | <b>2017</b> [1] - 590:18  |  | 697:24, 698:8,  |
| <b>1.253</b> [1] - 721:14  | 691:1, 728:20, 751:7  | <b>2018</b> [11] - 590:19,  | <b>31</b> [3] - 587:16, 588:6, 588:7   | 698:10, 708:23,   |
| <b>1.43</b> [1] - 721:14   | <b>15,000</b> [1] - 748:1   | 590:21, 617:18,   |  | 708:25, 711:2,  |
| <b>1.971</b> [1] <b>-</b> 721:18   | 15-minute [2] -   | 618:8, 676:6,   | <b>32</b> [2] - 701:20, 702:9  | 711:5, 712:5, 713:3,  |
| <b>10</b> [20] <b>-</b> 574:12,  | 643:15, 741:11  | 676:11, 680:5,  | <b>3209</b> [1] - 572:3<br><b>33</b> [4] - 690:16,   | 715:21  |
| 642.24 642.0   | <b>1536</b> [1] <b>-</b> 571:9  | 07 0.11, 000.0,   | <b>33</b>  4  <b>-</b> 090. 10,  | <b>5.5</b> [1] - 711:8  |
| 642:21, 643:9,   |   | 689.2 689.4   |  | 0.0 [1]   |
| 658:15, 676:22,  | <b>1580</b> [1] - 571:23  | 689:2, 689:4,<br>710:16, 728:21   | 713:21, 715:4, 715:6   | <b>50</b> [6] - 592:17, 676:5,  |
| 658:15, 676:22,<br>677:3, 678:24,  | <b>1580</b> [1] - 571:23<br><b>15th</b> [2] - 663:16,   | 710:16, 728:21  | 713:21, 715:4, 715:6<br><b>333</b> [1] - 571:7   |   |
| 658:15, 676:22,<br>677:3, 678:24,<br>694:4, 703:7,   | <b>1580</b> [1] - 571:23<br><b>15th</b> [2] - 663:16,<br>738:13   | 710:16, 728:21<br><b>2019</b> [5] - 569:13,   | 713:21, 715:4, 715:6 <b>333</b> [1] - 571:7 <b>34</b> [5] - 690:7, 690:14,   | <b>50</b> [6] - 592:17, 676:5,  |
| 658:15, 676:22,<br>677:3, 678:24,<br>694:4, 703:7,<br>703:10, 703:14,  | <b>1580</b> [1] - 571:23<br><b>15th</b> [2] - 663:16,<br>738:13<br><b>16</b> [2] - 620:1, 728:21  | 710:16, 728:21<br><b>2019</b> [5] - 569:13,<br>603:13, 724:15,  | 713:21, 715:4, 715:6<br><b>333</b> [1] - 571:7<br><b>34</b> [5] - 690:7, 690:14,<br>691:8, 711:1, 715:21   | <b>50</b> [6] - 592:17, 676:5, 713:24, 716:25,  |
| 658:15, 676:22,<br>677:3, 678:24,<br>694:4, 703:7,<br>703:10, 703:14,<br>714:16, 722:25,   | <b>1580</b> [1] - 571:23<br><b>15th</b> [2] - 663:16,<br>738:13<br><b>16</b> [2] - 620:1, 728:21<br><b>1600</b> [1] - 570:16  | 710:16, 728:21<br><b>2019</b> [5] - 569:13,<br>603:13, 724:15,<br>738:11, 774:14  | 713:21, 715:4, 715:6 333 [1] - 571:7 34 [5] - 690:7, 690:14, 691:8, 711:1, 715:21 35 [5] - 590:13,   | <b>50</b> [6] - 592:17, 676:5, 713:24, 716:25, 728:21   |
| 658:15, 676:22,<br>677:3, 678:24,<br>694:4, 703:7,<br>703:10, 703:14,<br>714:16, 722:25,<br>728:18, 728:21,  | 1580 [1] - 571:23<br>15th [2] - 663:16,<br>738:13<br>16 [2] - 620:1, 728:21<br>1600 [1] - 570:16<br>17 [5] - 615:20, 643:9,   | 710:16, 728:21<br><b>2019</b> [5] - 569:13,<br>603:13, 724:15,<br>738:11, 774:14<br><b>2020</b> [7] - 592:23,   | 713:21, 715:4, 715:6  333 [1] - 571:7  34 [5] - 690:7, 690:14, 691:8, 711:1, 715:21  35 [5] - 590:13, 615:16, 635:22,  | <b>50</b> [6] - 592:17, 676:5,<br>713:24, 716:25,<br>728:21<br><b>50,000</b> [1] - 594:7  |
| 658:15, 676:22,<br>677:3, 678:24,<br>694:4, 703:7,<br>703:10, 703:14,<br>714:16, 722:25,<br>728:18, 728:21,<br>728:22, 728:23,   | 1580 [1] - 571:23<br>15th [2] - 663:16,<br>738:13<br>16 [2] - 620:1, 728:21<br>1600 [1] - 570:16<br>17 [5] - 615:20, 643:9,<br>674:17, 674:18,  | 710:16, 728:21<br><b>2019</b> [5] - 569:13,<br>603:13, 724:15,<br>738:11, 774:14  | 713:21, 715:4, 715:6 333 [1] - 571:7 34 [5] - 690:7, 690:14, 691:8, 711:1, 715:21 35 [5] - 590:13, 615:16, 635:22, 712:1   | <b>50</b> [6] - 592:17, 676:5,<br>713:24, 716:25,<br>728:21<br><b>50,000</b> [1] - 594:7<br><b>50,000-and-change</b>  |
| 658:15, 676:22,<br>677:3, 678:24,<br>694:4, 703:7,<br>703:10, 703:14,<br>714:16, 722:25,<br>728:18, 728:21,<br>728:22, 728:23,<br>732:2, 734:23  | 1580 [1] - 571:23<br>15th [2] - 663:16,<br>738:13<br>16 [2] - 620:1, 728:21<br>1600 [1] - 570:16<br>17 [5] - 615:20, 643:9,<br>674:17, 674:18,<br>674:21  | 710:16, 728:21<br><b>2019</b> [5] - 569:13,<br>603:13, 724:15,<br>738:11, 774:14<br><b>2020</b> [7] - 592:23,<br>617:18, 633:20,<br>633:21, 633:23,   | 713:21, 715:4, 715:6 333 [1] - 571:7 34 [5] - 690:7, 690:14, 691:8, 711:1, 715:21 35 [5] - 590:13, 615:16, 635:22, 712:1 356 [1] - 683:13  | 50 [6] - 592:17, 676:5,<br>713:24, 716:25,<br>728:21<br>50,000 [1] - 594:7<br>50,000-and-change<br>[1] - 698:14   |
| 658:15, 676:22,<br>677:3, 678:24,<br>694:4, 703:7,<br>703:10, 703:14,<br>714:16, 722:25,<br>728:18, 728:21,<br>728:22, 728:23,<br>732:2, 734:23  | 1580 [1] - 571:23<br>15th [2] - 663:16,<br>738:13<br>16 [2] - 620:1, 728:21<br>1600 [1] - 570:16<br>17 [5] - 615:20, 643:9,<br>674:17, 674:18,<br>674:21<br>17.77 [2] - 579:22,   | 710:16, 728:21 2019 [5] - 569:13, 603:13, 724:15, 738:11, 774:14 2020 [7] - 592:23, 617:18, 633:20, 633:21, 633:23, 713:20, 723:2   | 713:21, 715:4, 715:6  333 [1] - 571:7  34 [5] - 690:7, 690:14, 691:8, 711:1, 715:21  35 [5] - 590:13, 615:16, 635:22, 712:1  356 [1] - 683:13  36 [1] - 674:17   | 50 [6] - 592:17, 676:5,<br>713:24, 716:25,<br>728:21<br>50,000 [1] - 594:7<br>50,000-and-change<br>[1] - 698:14<br>500 [1] - 572:6  |
| 658:15, 676:22,<br>677:3, 678:24,<br>694:4, 703:7,<br>703:10, 703:14,<br>714:16, 722:25,<br>728:18, 728:21,<br>728:22, 728:23,<br>732:2, 734:23<br>100 [2] - 570:5, 655:8<br>104 [1] - 572:3                                 | 1580 [1] - 571:23<br>15th [2] - 663:16,<br>738:13<br>16 [2] - 620:1, 728:21<br>1600 [1] - 570:16<br>17 [5] - 615:20, 643:9,<br>674:17, 674:18,<br>674:21<br>17.77 [2] - 579:22,<br>580:1  | 710:16, 728:21 2019 [5] - 569:13, 603:13, 724:15, 738:11, 774:14 2020 [7] - 592:23, 617:18, 633:20, 633:21, 633:23, 713:20, 723:2 2021 [1] - 633:24   | 713:21, 715:4, 715:6  333 [1] - 571:7  34 [5] - 690:7, 690:14, 691:8, 711:1, 715:21  35 [5] - 590:13, 615:16, 635:22, 712:1  356 [1] - 683:13  36 [1] - 674:17  37 [2] - 674:18, 713:1                             | 50 [6] - 592:17, 676:5,<br>713:24, 716:25,<br>728:21<br>50,000 [1] - 594:7<br>50,000-and-change<br>[1] - 698:14<br>500 [1] - 572:6<br>50266 [1] - 570:23  |
| 658:15, 676:22,<br>677:3, 678:24,<br>694:4, 703:7,<br>703:10, 703:14,<br>714:16, 722:25,<br>728:18, 728:21,<br>728:22, 728:23,<br>732:2, 734:23<br>100 [2] - 570:5, 655:8<br>104 [1] - 572:3<br>10th [2] - 638:25,           | 1580 [1] - 571:23<br>15th [2] - 663:16,<br>738:13<br>16 [2] - 620:1, 728:21<br>1600 [1] - 570:16<br>17 [5] - 615:20, 643:9,<br>674:17, 674:18,<br>674:21<br>17.77 [2] - 579:22,<br>580:1<br>18 [1] - 615:20                       | 710:16, 728:21 2019 [5] - 569:13, 603:13, 724:15, 738:11, 774:14 2020 [7] - 592:23, 617:18, 633:20, 633:21, 633:23, 713:20, 723:2 2021 [1] - 633:24 2022 [1] - 633:24                         | 713:21, 715:4, 715:6  333 [1] - 571:7  34 [5] - 690:7, 690:14, 691:8, 711:1, 715:21  35 [5] - 590:13, 615:16, 635:22, 712:1  356 [1] - 683:13  36 [1] - 674:17  37 [2] - 674:18, 713:1  37-and-a-half [1] -        | 50 [6] - 592:17, 676:5,<br>713:24, 716:25,<br>728:21<br>50,000 [1] - 594:7<br>50,000-and-change<br>[1] - 698:14<br>500 [1] - 572:6<br>50266 [1] - 570:23<br>50309 [7] - 570:14,                                     |
| 658:15, 676:22,<br>677:3, 678:24,<br>694:4, 703:7,<br>703:10, 703:14,<br>714:16, 722:25,<br>728:18, 728:21,<br>728:22, 728:23,<br>732:2, 734:23<br>100 [2] - 570:5, 655:8<br>104 [1] - 572:3<br>10th [2] - 638:25,<br>663:15 | 1580 [1] - 571:23<br>15th [2] - 663:16,<br>738:13<br>16 [2] - 620:1, 728:21<br>1600 [1] - 570:16<br>17 [5] - 615:20, 643:9,<br>674:17, 674:18,<br>674:21<br>17.77 [2] - 579:22,<br>580:1<br>18 [1] - 615:20<br>18th [2] - 738:14, | 710:16, 728:21 2019 [5] - 569:13, 603:13, 724:15, 738:11, 774:14 2020 [7] - 592:23, 617:18, 633:20, 633:21, 633:23, 713:20, 723:2 2021 [1] - 633:24 2022 [1] - 633:24 204 [2] - 571:12, 572:3 | 713:21, 715:4, 715:6  333 [1] - 571:7  34 [5] - 690:7, 690:14, 691:8, 711:1, 715:21  35 [5] - 590:13, 615:16, 635:22, 712:1  356 [1] - 683:13  36 [1] - 674:17  37 [2] - 674:18, 713:1  37-and-a-half [1] - 728:12 | 50 [6] - 592:17, 676:5,<br>713:24, 716:25,<br>728:21<br>50,000 [1] - 594:7<br>50,000-and-change<br>[1] - 698:14<br>500 [1] - 572:6<br>50266 [1] - 570:23<br>50309 [7] - 570:14,<br>570:17, 571:4,                   |
| 658:15, 676:22,<br>677:3, 678:24,<br>694:4, 703:7,<br>703:10, 703:14,<br>714:16, 722:25,<br>728:18, 728:21,<br>728:22, 728:23,<br>732:2, 734:23<br>100 [2] - 570:5, 655:8<br>104 [1] - 572:3<br>10th [2] - 638:25,           | 1580 [1] - 571:23<br>15th [2] - 663:16,<br>738:13<br>16 [2] - 620:1, 728:21<br>1600 [1] - 570:16<br>17 [5] - 615:20, 643:9,<br>674:17, 674:18,<br>674:21<br>17.77 [2] - 579:22,<br>580:1<br>18 [1] - 615:20                       | 710:16, 728:21 2019 [5] - 569:13, 603:13, 724:15, 738:11, 774:14 2020 [7] - 592:23, 617:18, 633:20, 633:21, 633:23, 713:20, 723:2 2021 [1] - 633:24 2022 [1] - 633:24                         | 713:21, 715:4, 715:6  333 [1] - 571:7  34 [5] - 690:7, 690:14, 691:8, 711:1, 715:21  35 [5] - 590:13, 615:16, 635:22, 712:1  356 [1] - 683:13  36 [1] - 674:17  37 [2] - 674:18, 713:1  37-and-a-half [1] -        | 50 [6] - 592:17, 676:5,<br>713:24, 716:25,<br>728:21<br>50,000 [1] - 594:7<br>50,000-and-change<br>[1] - 698:14<br>500 [1] - 572:6<br>50266 [1] - 570:23<br>50309 [7] - 570:14,<br>570:17, 571:4,<br>571:7, 571:16, |

| 50319 [1] - 570:9<br>505 [2] - 571:6, 571:15<br>52 [1] - 701:23<br>52401 [1] - 570:3<br>52556 [1] - 570:11<br>53202 [1] - 570:6<br>54 [1] - 642:14<br>569 [1] - 569:22<br>57 [1] - 590:13<br>577 [1] - 573:4<br>579(Long [1] - 573:4  | 693(Callisto [1] - 573:19 694 [1] - 573:18  7  7 [4] - 589:16, 719:9, 725:3, 730:14 7.18 [1] - 622:11 70 [3] - 588:9, 590:19, 596:22   | <b>9</b> [13] - 569:13, 574:12, 674:16, 674:21, 676:22, 677:1, 677:14, 677:19, 677:21, 694:3, 703:7, 703:10, 703:14 <b>9.58</b> [2] - 580:2, 580:4 <b>9.6</b> [1] - 580:6  | 608:16, 608:21,<br>609:25, 657:2<br>account [20] - 594:10,<br>597:17, 597:24,<br>597:25, 601:5,<br>604:9, 604:20,<br>610:18, 627:23,<br>629:22, 648:11,<br>649:12, 649:14,<br>649:16, 649:17,<br>650:16, 660:23,<br>680:20, 684:13,  | addressing [5] - 612:2, 619:1, 648:24, 683:4, 732:9 adequate [1] - 743:24 adequately [1] - 608:5 adhered [1] - 623:22 adhering [1] - 630:14 adjourning [1] - 750:10 adjournment [1] - 569:14  |
|---|--|--|--|---|
| <b>58</b> [1] - 590:18<br><b>583</b> [2] - 573:4, 574:10<br><b>584</b> [1] - 573:5<br><b>585</b> [1] - 573:5  | 700 [3] - 570:16,<br>570:19, 570:19<br>703 [1] - 574:12<br>705 [1] - 573:21<br>706(Frank [1] - 573:21  | 9.8 [1] - 638:2<br>90 [1] - 587:3<br>95 [1] - 590:20<br>98 [1] - 590:18  | 694:7<br>accounting [5] -<br>627:22, 629:19,<br>656:22, 702:2<br>accounts [1] - 698:11   | adjust [1] - 697:14<br>adjustment [3] -<br>627:1, 687:5, 687:15<br>adjustments [7] -<br>606:1, 627:3, 628:3,<br>628:4, 628:5, 628:7,  |
| 6 [5] - 579:18, 581:22, 713:3, 719:9, 724:5 6.2 [1] - 580:16 60 [3] - 596:21, 642:14, 728:22 607 [1] - 573:12 616 [1] - 573:12 616 [1] - 573:12 620 [1] - 573:13 621 [1] - 573:14 632 [1] - 573:14 632 [1] - 573:14 632 [1] - 573:14 634 [1] - 573:14 636 [1] - 573:14 636 [1] - 573:14 636 [1] - 573:14 636 [1] - 573:15 638 [1] - 573:16 639 [1] - 573:16 64 [1] - 573:16 | 710 [2] - 573:23<br>713 [1] - 573:23<br>715 [1] - 573:23<br>718 [2] - 573:24, 574:4<br>719 [1] - 574:6<br>730 [1] - 574:6<br>734(Callisto [1] - 574:6<br>742 [1] - 573:7<br>747 [1] - 573:7<br>749 [1] - 574:14<br>75 [1] - 592:17<br>752 [2] - 573:9, 751:8<br>763 [1] - 573:9<br>765 [1] - 573:9<br>766 [1] - 573:9<br>767 [1] - 573:9<br>768 [1] - 573:10<br>771 [1] - 573:9<br>773 [1] - 751:8 | <b>A</b> a.m [3] - 569:14, 589:16, 704:7  ability [3] - 683:10, 732:25, 735:1  able [14] - 586:15, 592:10, 593:13, 604:8, 604:19, 608:5, 608:11, 609:2, 636:25, 640:10, 652:9, 738:1, 746:22, 746:25  abnormal [1] - 592:7  above-entitled [1] - 774:5  absent [1] - 619:14  absolutely [4] - 606:16, 612:9, 613:3, 624:24 | accurate [10] - 594:11,<br>627:18, 628:10,<br>631:11, 640:12,<br>643:1, 643:7, 714:8,<br>733:18<br>achieve [3] - 635:4,<br>666:4, 716:2<br>achieving [1] - 635:16<br>acted [1] - 774:4<br>action [2] - 593:25,<br>750:11<br>activities [2] - 601:20,<br>736:19<br>actors [1] - 737:7<br>actual [4] - 599:17,<br>629:25, 687:19,<br>707:20<br>add [2] - 659:19,<br>666:12<br>added [2] - 644:18,<br>682:17<br>addition [2] - 611:1, | 697:16  ADM [10] - 570:18, 573:22, 689:16, 690:6, 692:24, 693:5, 693:21, 709:17, 743:14, 743:15  ADM's [3] - 691:16, 715:23, 715:25 administrative [1] - 575:11  Administrative [1] - 622:11 admitted [3] - 582:24, 703:13, 749:14  ADMS [1] - 671:14 adopt [1] - 693:17 adopted [2] - 654:4, 654:6 advance [1] - 595:15 advances [2] - 696:10, |
| <b>64</b> [1] - 590:16<br><b>65</b> [1] - 642:14<br><b>651(Callisto</b> [1] -   | <b>774</b> [1] - 569:22  | absorb [1] - 720:12<br>accepting [1] - 631:9<br>access [1] - 608:10  | 641:10<br>additional [16] -  | 696:13<br>advancing [1] -<br>697:12   |
| 573:16 65101 [1] - 571:12 656 [1] - 573:6 6601 [1] - 570:22 663 [1] - 573:17 664 [1] - 573:17 666 [4] - 570:13, 571:3, 571:20, 572:5 670 [1] - 573:17 671 [1] - 573:17 672 [1] - 573:17 673 [1] - 573:18 675(Callisto [1] - 573:18 688(Frank [1] - 573:19   | 8 [4] - 676:25, 677:2,<br>732:2, 734:23<br>8(G) [1] - 579:11<br>80 [1] - 687:17<br>80202 [1] - 571:10<br>80203 [1] - 571:24<br>83 [1] - 590:18<br>87 [1] - 697:10<br>8760 [1] - 675:20<br>880 [1] - 571:24<br>8:30 [1] - 569:14  | accommodated [1] - 708:3 accompanied [1] - 637:21 accompanying [2] - 663:17, 729:25 accomplished [1] - 708:10 accordance [1] - 702:10 accordingly [1] - 675:25 Account [9] - 592:9, 592:21, 594:14, 606:17, 608:9,   | 607:23, 612:6,<br>612:25, 619:22,<br>626:15, 627:5,<br>657:22, 661:4,<br>666:8, 667:5, 670:8,<br>710:2, 716:6, 719:5,<br>739:13, 739:14<br>additions [4] - 621:22,<br>675:2, 710:7, 718:18<br>address [6] - 591:14,<br>598:13, 602:7,<br>626:19, 646:13,<br>740:6<br>addressed [4] -<br>652:21, 683:25,<br>732:16, 735:3   | advantage [1] - 748:7<br>adverse [3] - 624:20,<br>625:12, 625:18<br>Advisers [1] - 727:25<br>Advocate [12] - 570:7,<br>614:9, 614:19,<br>621:8, 621:18,<br>624:7, 624:8,<br>638:16, 663:3,<br>673:17, 674:2, 674:4<br>advocating [1] -<br>684:13<br>AED [12] - 675:13,<br>675:15, 676:2,<br>688:18, 688:20,                                     |

| 688:25, 700:4,                | 709:1                       |
|-------------------------------|-----------------------------|
| 743:22, 743:25,               | allocating [1] - 688:21     |
| 743.22, 743.23,               |                             |
| · ·                           | allocation [38] -           |
| affected [1] - 615:11         | 651:23, 652:2,              |
| affiliated [1] - 587:21       | 653:15, 653:23,             |
| AFTERNOON[1] -                | 676:2, 676:12,              |
| 705:1                         | 676:16, 680:9,              |
| <b>afternoon</b> [4] - 705:8, | 680:13, 680:16,             |
| 705:9, 706:10,                | 680:19, 684:18,             |
| 706:11                        | 687:2, 687:6,               |
| agency [1] - 748:12           | 687:15, 687:25,             |
| agent [1] - 595:20            | 688:20, 689:21,             |
| aggregate [1] - 702:4         | 690:3, 690:20,              |
| aggressively[1] -             | 691:22, 694:5,              |
| 692:16                        | 694:9, 702:14,              |
| <b>ago</b> [2] - 659:13,      | 702:15, 707:5,              |
| 684:11                        | 707:8, 707:14,              |
| agree [14] - 581:15,          | 707:20, 708:9,              |
| 639:16, 641:12,               | 713:11, 714:1,              |
| 660:5, 661:7,                 | 714:2, 714:10,              |
| 670:25, 679:5,                | 716:8, 716:15,              |
| 685:3, 710:22,                | 716:19, 744:2               |
| 712:17, 736:3,                | allocations [2] -           |
| 736:12, 746:19,               | 707:17, 717:14              |
| 748:14                        | allocator [38] - 678:1,     |
| agreed [4] - 623:3,           | 678:2, 680:22,              |
| 637:25, 732:19,               | 681:6, 681:13,              |
| 736:13                        | 681:16, 681:21,             |
| agreement [12] -              | 681:24, 682:12,             |
| 587:21, 615:7,                | 682:21, 682:25,             |
| 650:24, 671:5,                | 683:24, 684:7,              |
| 671:16, 674:11,               | 685:14, 689:11,             |
| 731:16, 731:18,               | 689:15, 689:20,             |
| 732:9, 732:16,                | 691:21, 691:23,             |
| 732:18, 746:17                | 692:4, 700:4, 700:6,        |
| agreements [1] -              | 700:23, 701:4,              |
| 732:11                        | 701:24, 702:5,              |
| ahead [4] - 616:23,           | 702:11, 702:16,             |
| 647:25, 651:14,               | 714:5, 714:6,               |
| 699:23                        | 714:14, 715:9,              |
| <b>AIA</b> [1] - 570:10       | 716:11, 716:14,             |
| alerted [1] - 600:24          | 743:25, 744:5               |
| alerts [1] - 592:13           | <b>allow</b> [3] - 592:17,  |
| aligns [1] - 624:4            | 629:11, 667:22              |
| Alliant [5] - 584:15,         | allowing [2] - 575:5,       |
| 595:18, 609:1,                | 669:21                      |
| 611:4, 732:20                 | <b>allows</b> [4] - 586:13, |
| allocate [3] - 652.4,         | 595:25, 606:3,              |
| 680:22, 691:6                 | 666:15                      |
| allocated [15] -              | <b>allude</b> [2] - 627:11, |
| 652:12, 653:5,                | 665:10                      |
| 681:20, 681:23,               | alluded [2] - 649:25,       |
| 682:12, 682:13,               | 660:2                       |
| 702:8, 702:10,                | almost [1] - 690:25         |
| 706:18, 706:19,               | alternative [4] - 731:3,    |
| 706:24, 707:10,               | 731:11, 746:8, 748:7        |
| 707:22, 708:12,               | alternatives [2] -          |
|                               |                             |

```
604:4, 697:17
AMANDA[1] - 570:21
Amazon [1] - 593:7
American's [1] -
 581:17
AMI [32] - 592:2,
 592:11, 597:4,
 597:7, 599:3,
 599:21, 610:21,
 610:22, 657:7,
 657:8, 665:11,
 665:12, 665:19,
 665:22, 665:25,
 666:3, 666:6, 666:9,
 666:11, 666:15,
 666:20, 666:23,
 667:2, 667:4, 667:5,
 669:12, 669:13,
 669:21, 670:1,
 695:22, 696:1, 699:6
amortization [1] -
 698:13
amortized [3] -
 631:24, 632:18,
 632:20
amount [20] - 605:9,
 606:22. 617:12.
 640:5, 640:9,
 640:11, 640:15,
 642:9, 657:16,
 659:14, 670:15,
 686:3, 686:4, 686:6,
 693:6, 693:7, 693:9,
 699:17, 711:18,
 720:19
amounts [1] - 605:12
ample [1] - 728:3
AMR [9] - 665:19,
 665:23, 666:1,
 666:4, 666:9,
 666:16, 666:18,
 666:19, 667:2
AMY [1] - 571:17
analog [1] - 699:14
analyses [2] - 579:9,
 731:3
analysis [18] - 580:5,
 580:10, 581:5,
 654:8, 654:11,
 655:5, 661:19,
 667:20, 668:6,
 668:11, 672:21,
 673:1, 673:4, 683:8,
 686:13, 722:18,
 725:23, 728:3
analyst [1] - 674:5
analyst's [1] - 628:4
```

analysts [1] - 702:22 analyze[1] - 668:8 AND [1] - 569:7 **ANDREW** [1] - 572:5 Andrew [1] - 570:2 annual [5] - 612:10, 629:23, 742:23, 745:5, 745:8 anomalus [2] - 679:7, 680:1 answer [18] - 585:23, 586:2, 587:2, 587:11, 590:11, 607:25, 608:5, 613:1, 634:21, 642:6, 643:11, 652:1, 652:9, 671:22, 686:24, 687:4, 725:18, 731:9 answered [1] - 586:1 answering [1] -587:15 answers [5] - 578:13, 578:20, 615:25, 622:1, 730:7 anticipate [1] - 686:2 anticipated [1] -685:25 anticipates [1] -674:11 apartment [1] - 730:25 apologize [2] - 717:7, 749:4 app [3] - 592:10, 608:12, 608:23 APPEARANCES[3] -570:1, 571:1, 572:1 apples [2] - 667:23 apples-to-apples [1] -667:23 applicable [3] -726:19, 746:18, 748:11 applied [2] - 688:7, 688:20 applies [2] - 735:19, 736:25 apply [2] - 646:3, 725:23 applying [2] - 690:1, 746:4 appreciate [1] - 617:5 approach [26] -630:15, 630:23, 644:21, 676:3, 676:4, 676:8,

676:14, 678:7, 684:25, 686:15, 687:3, 691:4, 691:5, 692:1, 693:5, 693:17, 693:22, 694:6, 694:10, 694:11, 700:14, 700:18, 711:7, 711:17, 711:22, 716:7 appropriate [14] -610:12, 637:24, 641:21, 642:3, 646:13, 648:15, 652:1, 692:4, 692:6, 695:6, 702:5, 711:25, 742:21, 745:17 appropriately [4] -643:6, 652:12, 658:22, 660:9 approval [5] - 745:19, 745:21, 745:23, 747:24, 748:10 approve [1] - 622:12 approved [3] - 684:24, 724:18, 745:12 approves [1] - 747:21 arbitrary [2] - 687:5, 700:19 Archer [1] - 709:20 area [5] - 591:1, 595:4, 600:2, 602:11, 602:19 Area [3] - 571:2, 625:17, 718:2 areas [2] - 695:17, 731:22 argued [1] - 640:21 arguments [1] - 720:8 arise [1] - 641:25 arisen [1] - 603:12 arrangement [5] -593:14, 598:4, 599:23, 610:2, 645:4 arrival [1] - 588:22 Article [4] - 615:7, 671:8, 674:10, 674:14 aside [2] - 601:1, 634:8 aspect [2] - 620:15, 631:18 aspects [6] - 623:12, 624:2, 633:2, 633:3, 636:9, 701:12 assess [1] - 654:12

assessed [1] - 683:2 assessment[1] -682:24 asset [1] - 630:13 assets [2] - 630:6, 634:3 assign [1] - 681:17 assigned [8] - 587:5, 589:12, 604:9, 604:18, 605:1, 683:23, 684:6, 684:12 assigning [1] - 681:1 assignment [1] -684:20 assist [1] - 604:20 assistance [1] - 617:6 associate [1] - 598:21 associated [9] -645:14, 646:6, 648:23, 691:11, 695:2, 698:16, 701:8, 701:11, 701:25 associates [6] -586:11, 587:15, 587:19, 588:6, 601:1, 610:1 Associates [1] -570:10 association [1] -744:5 assume [4] - 576:4. 587:25, 592:25, 699:10 assuming [1] - 747:24 assumptions [2] -629:14, 629:16 assurance [1] -635:14 assured [1] - 601:11 Atlanta [2] - 577:25, 580:22 attached [1] - 718:13 Attachment [2] -677:12 677:13 attempting [1] -598:18 attend [2] - 624:14, 658:8 attendance [1] -577:12 attention [3] - 585:7, 591:3, 738:9 Attorney [2] - 570:2, 571:9

attorney [1] - 623:20 Attorneys [1] - 571:6 attorneys [1] - 623:21 attracted [1] - 741:2 attributable [2] -735:13, 735:25 attributed [2] -627:14, 695:9 attributes [1] - 629:3 auditable [4] - 627:19, 628:10, 629:20, 629:22 August [3] - 639:1, 663:16, 663:17 authority [2] - 602:24, 731:7 auto [1] - 593:12 automated [1] -660:15

automatically [1] - 650:7
available [22] - 578:22, 585:15, 586:3, 594:10, 595:10, 600:13, 606:23, 607:3, 608:9, 611:18, 613:12, 616:3, 622:4, 639:7, 658:8, 659:11, 664:6, 675:8, 683:14, 710:19, 730:11, 732:14

**automatic** [1] - 610:3

Avenue [9] - 569:12, 570:5, 570:8, 570:13, 571:3, 571:6, 571:15, 572:3, 572:5 aver [1] - 583:10 average [27] - 580:1, 580:4, 580:15, 586:24, 587:2, 588:20, 589:4, 630:11, 630:12, 630:22, 643:2, 643:8, 675:16, 675:17, 675:21, 675:23, 676:9, 677:25, 678:3, 680:8, 689:7, 690:20, 694:4, 702:11, 712:7, 712:11, 712:22

averaging [1] - 587:1

avoid [3] - 634:13,

687:21, 706:14

avoided [7] - 644:22, 648:19, 648:20, 648:21, 649:4, 649:14, 649:18 aware [25] - 594:5, 596:2. 596:17. 600:9. 601:25. 603:11, 605:4, 605:7, 606:5, 606:7, 606:13, 633:7, 653:4, 653:8, 653:22, 655:1, 657:4, 657:17, 668:12, 674:10, 735:9, 739:22, 740:6, 747:20 **awfully** [1] - 580:23 aye [1] - 750:24 Aye [2] - 751:1, 751:3

### В

bachelor's [1] -584:20 back-of-the-meter [1] - 645:10 bad [1] - 700:8 balance [8] - 598:2, 598:4, 598:16, 598:19, 599:23, 635:20, 650:1, 724:19 balances [1] - 597:14 **ballpark** [1] - 605:14 banking [1] - 648:17 base [13] - 593:6, 595:1, 618:18, 619:21, 627:23, 630:23, 633:19, 650:19, 651:3, 668:22, 671:11, 671:17 based [34] - 579:9, 585:8, 585:9, 585:10, 585:11, 611:21, 628:8, 640:23, 646:17, 650:13, 651:4, 656:18, 657:4, 667:21, 676:5, 677:11, 678:21, 681:24, 682:14, 683:3, 684:18, 687:17, 687:18, 690:1, 691:15, 693:12, 713:22,

713:25, 714:8, 716:3, 716:22, 720:6, 725:15 bases [1] - 671:13 basis [10] - 660:15, 660:23. 673:4. 675:17, 676:11, 679:10, 720:9, 721:20, 723:19, 723:22 bear [2] - 641:9, 650:10 **become** [1] - 607:5 becomes [1] - 598:3 becoming [1] - 580:23 BEFORE [1] - 569:16 begin [6] - 576:16, 577:9, 599:9, 640:6, 705:3, 745:11 beginning [5] -584:22, 612:14, 615:13, 615:16, 619:25 begins [5] - 615:17, 615:20, 671:9, 686:23, 712:5 behalf [4] - 637:20, 733:1, 733:12, 733:15 behind [5] - 720:4, 720:14, 726:4, 727:8, 728:2 behind-the-meter [1] -720:4 believes [2] - 636:14, 738:4 Belin [1] - 571:20 below [2] - 581:7, 634.7 beneficial [4] -599:20, 649:21, 649:22, 672:4 benefit [13] - 595:22, 636:13, 636:16, 637:6, 637:16, 645:14, 650:13, 666:10, 666:22, 680:4, 693:21, 734:1, 734:4 benefited [1] - 598:2 benefits [14] - 634:5, 635:13, 636:11, 644:22, 646:6, 647:14, 648:7, 648:23, 650:15, 650:17, 651:8,

660:7, 661:20,

669:13 Bents [14] - 573:17, 589:21, 609:10, 654:23, 654:24, 662:21, 662:22, 663:14, 664:5, 664:11. 669:11. 670:25. 671:21. 672:13 BENTS [2] - 662:23, 663:1 Bents' [4] - 589:23, 589:25, 590:24, 609:6 BERG [1] - 718:1 Berg [8] - 574:4, 717:24, 718:10, 718:22, 719:4, 719:7, 729:7 best [7] - 624:11, 637:17, 663:9, 685:14, 690:5, 691:5, 714:11 Best [1] - 570:5 better [5] - 591:7. 629:1. 685:22. 691:25, 695:18 between [24] - 586:22, 596:21, 608:22, 643:3, 643:9, 648:1, 660:21, 663:23, 675:22, 678:9, 698:8, 700:10, 700:25, 715:22, 716:16, 722:15, 722:21, 722:23, 723:9, 723:15, 724:6, 728:7, 737:2, 737:10 beyond [3] - 634:19, 695:4, 738:3 big [2] - 640:6, 650:4 biggest [2] - 626:24, 635:11 bill [36] - 590:15, 591:15, 591:17, 591:20, 593:12, 593:15, 593:18, 597:16, 597:23, 599:12, 599:13, 606:11, 606:18, 606:21, 607:5, 607:7, 612:24, 613:4. 618:6. 618:10, 618:13, 619:16, 619:19, 620:7, 620:13,

|                              | T                     | 1                                 | T                              |   |
|------------------------------|-----------------------|-----------------------------------|--------------------------------|---|
| 620:15, 620:21,              | 643:13, 644:25,       | 575:22, 576:3,                    | 625:12, 627:16,                | 740:15                                  |
| 620:23, 625:6,               | 645:3, 645:21,        | 576:17, 581:18,                   | 701:17                         | <b>BY</b> [35] - 577:18,                |
| 647:8, 682:4,                | 646:15, 646:21,       | 583:6, 585:12,                    | bought [4] - 580:21,           | 578:5, 579:2, 579:7,                    |
| 682:16, 712:15,              | 646:23, 647:7,        | 585:15, 586:1,                    | 580:22, 640:3                  | 579:17, 581:14,                         |
| 712:22, 712:23               | 647:17, 648:9,        | 586:2, 586:4, 587:6,              | <b>box</b> [2] - 586:3, 589:10 | 584:11, 607:21,                         |
| <b>Bill</b> [1] - 613:10     | 649:3, 649:11,        | 587:9, 589:3, 589:7,              | BRANT[1] - 571:14              | 614:15, 618:24,                         |
| <b>bill'</b> [1] - 590:21    | 649:19, 651:10,       | 589:13, 591:11,                   | break [1] - 707:15             | 621:14, 631:6,                          |
| billing [18] - 584:22,       | 656:11, 656:20,       | 596:4, 603:2,                     |                                | 634:24, 638:23,                         |
| 584:24, 586:13,              | 656:24, 657:7,        | 604:19, 607:19,                   | breaking [1] - 745:16          | 651:17, 663:13,                         |
| 586:20, 590:7,               | 657:13, 657:19,       | 607:24, 608:8,                    | BRET [1] - 571:13              | 670:24, 671:6,                          |
| 599:11, 601:3,               | 660:4, 661:7,         | 609:5, 610:20,                    | brief [3] - 581:21,            | 672:12, 673:23,                         |
| 601:14, 605:22,              | 661:11, 662:14,       | 611:14, 611:23,                   | 584:18, 673:2                  | 675:12, 677:9,                          |
|                              | 664:8, 664:19,        | 612:4, 612:23,                    | briefly [1] - 670:6            | 686:21, 688:17,                         |
| 605:25, 609:14,              | 664:25, 665:8,        | 613:23, 616:8,                    | <b>briefs</b> [4] - 738:16,    | 693:3, 705:19,                          |
| 609:16, 609:22,              | 665:18, 665:21,       | 619:7, 620:3,                     | 739:11, 739:16                 |   |
| 629:14, 629:16,              | 666:2, 666:10,        | 622:12, 631:8,                    | <b>bring</b> [7] - 576:8,      | 706:9, 710:5,                           |
| 679:16, 681:25,              | 666:17, 666:22,       | 634:6, 635:2,                     | 576:15, 648:10,                | 710:21, 715:19,                         |
| 682:10                       |                       |                                   | 650:10, 669:7,                 | 718:9, 729:22,                          |
| <b>bills</b> [10] - 590:8,   | 667:6, 667:20,        | 640:21, 641:1,<br>643:14, 643:21, | 722:24, 731:13                 | 734:20, 736:11,                         |
| 592:4, 606:14,               | 667:24, 668:5,        |                                   | bringing [1] - 632:11          | 747:13                                  |
| 606:25, 619:12,              | 668:10, 668:14,       | 651:12, 652:17,                   | <b>brings</b> [1] - 697:17     | Byron [1] - 571:14                      |
| 664:15, 665:6,               | 668:23, 669:3,        | 653:14, 655:1,                    | <b>broad</b> [2] - 648:10,     |   |
| 681:25, 682:15,              | 669:9, 669:11,        | 655:10, 658:1,                    | 682:13                         | С                                       |
| 734:9                        | 669:16, 670:2,        | 658:7, 664:7,                     | broader [10] - 589:16,         |   |
| <b>bit</b> [16] - 575:14,    | 670:6, 670:13,        | 667:24, 669:5,                    | 640:1, 641:19,                 | C-i-g-r-a-n-d [1] -                     |
| 578:2, 580:24,               | 670:17, 694:19,       | 669:12, 670:14,                   | 644:15, 645:8,                 | 584:14                                  |
| 588:25, 591:20,              | 695:8, 695:16,        | 671:23, 684:24,                   | 647:14, 647:18,                | calculate [1] - 717:3                   |
| 593:7, 595:14,               | 695:20, 696:2,        | 691:5, 692:3, 692:5,              | 648:3, 648:6                   | calculated [2] -                        |
| 602:11, 603:22,              | 696:15, 696:21,       | 693:17, 697:10,                   | brochures [1] - 613:9          | 667:18, 694:24                          |
| 606:7, 617:8, 635:1,         | 697:1, 697:13,        | 699:5, 699:22,                    | broken [3] - 742:20,           | calculates [1] - 675:17                 |
| 647:25, 672:14,              | 697:23, 698:1,        | 700:17, 703:24,                   | 743:2, 745:3                   | calculating [1] - 643:6                 |
| 695:18, 696:3                | 698:7, 698:19,        | 705:2, 707:25,                    | Brotherhood [1] -              | calculation [3] -                       |
| Black [1] - 641:22           | 698:22, 699:3,        | 711:21, 713:15,                   | 572:2                          |   |
| <b>BLAKE</b> [1] - 621:6     | 699:16, 699:20,       | 714:19, 715:7,                    | brought [3] - 591:16,          | 618:1, 676:14,<br>698:10                |
| <b>Blake</b> [3] - 573:14,   | 699:23, 700:3,        | 715:10, 719:1,                    | 661:3, 746:13                  |   |
| 621:5, 621:17                | 700:17, 700:21,       | 719:4, 724:18,                    | Brown [1] - 571:2              | <b>calendar</b> [3] - 658:18,           |
| blended [2] - 676:4,         | 713:9, 714:15,        | 731:7, 731:12,                    | brown [1] - 570:12             | 750:4                                   |
| 676:14                       | 714:25, 715:14,       | 731:13, 732:5,                    | Brummond [2] -                 | Callisto [28] - 573:14,                 |
| <b>BOARD</b> [144] - 569:16, | 717:6, 717:18,        | 734:22, 737:23,                   | 616:10, 619:2                  | 573:17, 573:24,                         |
| 573:2, 574:2,                | 719:7, 719:21,        | 738:4, 741:10,                    | Brummond's [1] -               | 575:9, 576:22,                          |
| 574:13, 583:3,               | 725:17, 726:14,       | 741:18, 741:19,                   | 616:12                         | 577:9, 577:16,                          |
| 583:14, 616:9,               | 726:22, 727:10,       | 742:11, 744:12,                   | budget [4] - 593:12,           | 583:18, 613:18,                         |
| 620:4, 620:10,               | 728:5, 728:15,        | 745:19, 745:23,                   | 610:2, 660:22, 661:1           | 631:3, 651:14,                          |
| 620:16, 620:20,              | 728:20, 729:3,        | 746:14, 747:15,                   | Buena [1] - 584:20             | 653:18, 657:19,                         |
| 622:6, 622:10,               | 730:13, 731:6,        | 747:21, 749:4,                    | Building [1] - 569:11          | 659:8, 659:20,                          |
| 622:21, 623:5,               | 731:11, 731:23,       | 749:5, 749:15,                    | buildings [1] - 730:25         | 660:2, 670:21,                          |
| 623:17, 623:24,              | 742:12, 742:24,       | 750:6, 750:16,                    | built [1] - 608:20             | 675:10, 676:24,<br>677:6, 693:1, 709:9, |
| 624:14, 624:18,              | 743:5, 743:10,        | 750:25, 751:2, 751:4              | <b>bulk</b> [2] - 678:9,       |   |
| 624:22, 624:25,              | 743:15, 743:19,       | <b>Board's</b> [8] - 622:7,       | 696:24                         | 734:18, 736:7,                          |
| 625:4, 625:10,               | 744:7, 744:11,        | 631:8, 667:8,                     | <b>burden</b> [2] - 631:21,    | 737:19, 738:20,                         |
| 625:16, 625:23,              | 744:16, 744:19,       | 667:11, 724:14,                   | 645:17                         | 741:3, 747:11                           |
| 626:1, 626:4, 632:1,         | 750:17, 750:20,       | 737:23, 747:24,                   | burdening [2] -                | CALLISTO [67] -                         |
| 632:8, 632:23,               | 751:1, 751:3          | 750:8                             | 644:19, 645:1                  | 570:4, 575:10,                          |
| 633:5, 636:19,               | board [1] - 656:10    | Board [1] - 615:13                | Business [1] - 577:24          | 576:10, 576:13,                         |
| 636:24, 637:3,               | Board [108] - 569:18, | bodies [1] - 607:4                | business [6] - 591:22,         | 576:23, 577:18,                         |
| 638:3, 639:10,               | 569:18, 575:2,        | borne [3] - 631:22,               | 591:23, 610:9,                 | 578:5, 578:22,<br>583:10, 613:21        |
| 639:13, 640:20,              | 575:4, 575:5, 575:7,  | 631:23, 632:9                     | 662:9, 681:10,                 | 583:19, 613:21,                         |
| 641:6, 642:2,                | 575:12, 575:15,       | <b>bottom</b> [4] - 590:2,        | 002.0, 001.10,                 | 617:3, 631:1, 631:4,                    |
|                              |                       |                                   |                                |   |
|                              | -                     |                                   | -                              |   |

|                            | T                        |                              |                                    | T                                 |
|----------------------------|--------------------------|------------------------------|------------------------------------|-----------------------------------|
| 631:6, 631:25,             | 650:1, 650:17            | 727:17, 728:2                | 621:9, 638:17,                     | 629:4, 629:9, 630:2,              |
| 639:8, 651:11,             | carrying [1] - 650:2     | Cedar [6] - 570:3,           | 656:4, 663:4,                      | 630:16, 630:20,                   |
| 651:15, 651:17,            | case [78] - 578:7,       | 585:9, 585:10,               | 673:18, 705:14,                    | 630:25, 631:3,                    |
| 654:14, 654:25,            | 578:8, 578:15,           | 588:3, 588:10,               | 709:22, 718:3,                     | 633:6, 633:11,                    |
| 655:16, 655:20,            | 578:17, 578:23,          | 588:11                       | 729:19, 742:4                      | 634:6, 634:13,                    |
| 657:21, 659:2,             | 579:6, 580:13,           | center [13] - 584:24,        | CHAIRPERSON [235] -                | 634:18, 638:4,                    |
| 659:12, 662:15,            | 580:25, 581:9,           | 585:3, 585:9,                | 575:2, 576:6,                      | 638:7, 638:10,                    |
| 670:20, 670:22,            | 581:17, 583:16,          | 585:21, 586:11,              | 576:12, 576:14,                    | 638:19, 643:14,                   |
| 670:24, 671:4,             | 586:12, 586:15,          | 586:22, 587:2,               | 576:18, 576:22,                    | 643:17, 643:21,                   |
| 671:6, 671:20,             | 590:8, 599:7,            | 588:16, 588:17,              | 577:6, 577:8,                      | 644:2, 644:7,                     |
| 675:12, 676:21,            | 610:25, 612:25,          | 596:17, 604:10,              | 577:15, 578:1,                     | 644:24, 651:14,                   |
| 677:1, 677:3, 677:5,       | 613:2, 617:13,           | 607:25, 608:4                | 578:4, 578:24,                     | 654:15, 654:17,                   |
| 677:8, 677:9,              | 617:21, 619:14,          | centers [2] - 589:4,         | 582:17, 582:20,                    | 654:20, 655:12,                   |
| 686:19, 686:21,            | 619:20, 623:1,           | 600:16                       | 582:23, 583:15,                    | 655:18, 656:6,                    |
| 688:10, 692:23,            | 623:10, 623:16,          | Centerville [3] - 588:2,     | 583:18, 583:20,                    | 656:10, 657:24,                   |
| 693:3, 694:17,             | 625:22, 626:25,          | 588:9, 588:12                | 584:2, 584:9,                      | 658:25, 659:8,                    |
| 703:6, 709:10,             | 628:12, 630:24,          | cents [16] - 697:9,          | 585:16, 585:19,                    | 662:16, 662:19,                   |
| 710:21, 713:7,             | 631:23, 631:24,          | 697:10, 697:24,              | 586:24, 587:4,                     | 662:22, 662:24,                   |
| 718:23, 734:14,            | 632:3, 632:5,            | 721:14, 721:18,              | 587:13, 587:17,                    | 663:6, 663:10,                    |
| 734:20, 736:9,             | 632:12, 632:15,          | 722:13, 728:10,              | 587:24, 588:5,                     | 664:7, 670:19,                    |
| 736:11, 737:13,            | 632:17, 632:21,          | 728:11, 728:17,              | 588:13, 588:19,                    | 670:21, 671:21,                   |
| 737:22, 738:21,            | 633:2, 635:6,            | 728:18, 728:20,              | 589:2, 589:11,                     | 672:3, 672:10,                    |
| 738:25, 739:23,            | 635:16, 636:25,          | 728:21, 728:22               | 589:19, 589:24,                    | 673:9, 673:12,                    |
| 740:10, 740:13,            | 637:10, 637:18,          | certain [11] - 598:18,       | 590:10, 590:23,                    | 673:20, 675:10,                   |
| 741:5, 741:9,              | 637:25, 638:2,           | 601:4, 623:2,                | 591:9, 592:20,                     | 676:24, 677:2,                    |
| 747:13, 749:3,             | 639:1, 640:16,           | 623:10, 623:12,              | 592:24, 594:2,                     | 677:4, 677:6,                     |
| 749:12                     | 641:1, 647:7,            | 633:1, 633:3,                | 594:8, 594:14,                     | 688:11, 688:13,                   |
| campus [2] - 720:5,        | 647:18, 648:10,          | 657:11, 669:2,               | 594:17, 595:8,                     | 692:20, 693:1,                    |
| 720:12                     | 651:24, 652:6,           | 695:5, 733:1                 | 596:2, 596:7,                      | 700:22, 701:5,                    |
| cannot [3] - 733:13,       | 652:13, 653:4,           | certainly [16] - 575:24,     | 596:10, 596:13,                    | 701:13, 702:19,                   |
| 734:6, 740:10              | 653:7, 653:16,           | 580:12, 606:8,               | 596:19, 597:12,                    | 702:23, 702:25,                   |
| capability [1] - 610:21    | 653:20, 660:10,          | 610:15, 655:7,               | 597:20, 598:5,                     | 703:2, 703:9,                     |
| capable [1] - 667:5        | 676:1, 679:24,           | 660:9, 661:10,               | 598:8, 598:25,                     | 703:12, 703:16,                   |
| capacity [4] - 649:9,      | 680:11, 684:23,          | 661:16, 661:21,              | 599:3, 600:9,                      | 703:19, 705:2,                    |
| 649:10, 747:18,            | 684:25, 685:3,           | 686:3, 714:18,               | 601:13, 601:25,                    | 705:8, 705:10,                    |
| 748:18                     | 688:6, 688:25,           | 716:1, 720:22,               | 602:23, 603:2,                     | 705:16, 706:6,                    |
| capital [1] - 656:16       | 711:21, 713:20,          | 727:4, 727:19,               | 603:11, 603:16,                    | 709:9, 709:11,                    |
| capture [1] - 586:13       | 714:7, 716:17,           | 728:25                       | 603:24, 604:4,                     | 709:13, 709:16,                   |
| captures [1] - 685:15      | 716:20, 718:11,          | <b>Certainly</b> [1] - 590:6 | 604:15, 604:25,                    | 709:24, 715:15,                   |
| Cardon [2] - 584:9,        | 729:24, 738:18,          | certification [2] -          | 605:4, 605:8,                      | 717:19, 717:23,                   |
| 607:18                     | 743:1, 743:8             | 633:18, 634:1                | 605:11, 605:18,                    | 718:5, 729:5, 729:8,              |
| <b>CARDON</b> [7] - 570:2, | cases [4] - 581:3,       | Certified [1] - 774:2        | 606:5, 606:9,                      | 729:12, 731:25,                   |
| 583:25, 584:11,            | 597:13, 662:9, 678:8     | CERTIFIED [2] -              | 606:13, 607:2,                     | 732:4, 732:15,                    |
| 585:12, 607:19,            | catch [1] - 701:13       | 569:25, 774:17               | 607:12, 607:15,                    | 732:21, 732:24,                   |
| 607:21, 613:13             | categories [2] - 591:4,  | certify [1] - 774:3          | 607:18, 613:15,                    | 733:8, 733:11,                    |
| care [6] - 602:21,         | 694:9                    | cetera [1] - 732:12          | 613:18, 613:25,                    | 733:18, 733:23,                   |
| 602:25, 606:21,            | category [3] - 587:7,    | <b>Chair</b> [12] - 575:20,  | 614:5, 614:12,                     | 734:8, 734:11,                    |
| 655:14, 726:8,             | 681:5, 681:8             | 576:17, 607:19,              | 616:5, 616:8,                      | 734:16, 736:7,                    |
| 726:10                     | caused [5] - 592:3,      | 607:24, 608:8,               | 616:10, 616:15,                    | 737:14, 737:16,                   |
| carefully [2] - 683:20,    | 597:2, 606:3, 661:5,     | 609:5, 610:20,               | 616:20, 617:1,                     | 737:19, 738:6,                    |
| 683:21                     | 689:6                    | 611:14, 611:23,              | 617:5, 617:23,                     | 738:23, 739:1,                    |
| carry [1] - 648:18         | causers [1] - 694:25     | 612:4, 612:23,               | 618:5, 618:9,                      | 739:3, 739:7, 740:8,              |
| carryforward [3] -         | causes [2] - 592:6,      | 734:22                       | 618:15, 618:20,                    | 740:11, 741:3,                    |
| 635:14, 635:15,            | 706:22                   | <b>chair</b> [1] - 750:24    | 620:3, 620:25,                     | 741:8, 741:10,                    |
| 635:20                     | causing [1] - 695:14     | Chairperson [14] -           | 621:11, 626:6,                     | 741:22, 742:6,<br>742:11, 744:22, |
| carryforwards [4] -        | caveat [1] - 709:5       | 569:17, 577:4,               | 626:11, 626:20,<br>628:13, 628:18, | 745:10, 745:18,                   |
| 635:17, 635:21,            | <b>CEA</b> [3] - 727:13, | 584:7, 614:10,               | 020.10, 020.10,                    | 7 70.10, 7 70.10,                 |
|                            |                          |                              |                                    |                                   |
|                            |                          |                              |                                    |                                   |

|                        |   |                       | ,  |
|------------------------|---|-----------------------|----|
| 745:25, 746:3,         | 712:18, 713:19,                         | 690:24, 691:14,       | (  |
| 746:11, 747:2,         | 713:21, 713:22,                         | 691:21, 693:10,       | cl |
| 747:5, 747:11,         | 713:25, 714:12,                         | 693:22, 702:22,       | (  |
| 749:4, 749:13,         | 716:20, 716:23,                         | 706:12, 706:14,       | (  |
| 749:17, 749:20,        | 717:12, 735:14,                         | 706:18, 706:19,       | (  |
| 749:25, 750:3,         | 736:2                                   | 706:22, 707:8,        | cl |
| 750:15, 750:21,        | chart [2] - 679:6,                      | 707:9, 707:10,        | (  |
| 751:2, 751:4           | 679:8                                   | 707:16, 707:18,       | С  |
| challenge [1] - 593:20 | chase [1] - 582:13                      | 707:22, 708:7,        | C  |
| challenges [1] -       | cheaper [1] - 731:4                     | 708:9, 708:12,        | C  |
| 626:24                 | check [2] - 683:1,                      | 708:19, 709:1,        | -  |
| change [13] - 618:10,  | 687:20                                  | 711:8, 711:11,        | C  |
| 646:24, 667:25,        | <b>children</b> [1] - 625:7             | 711:15, 711:18,       | (  |
| 668:16, 680:18,        | choice [2] - 695:24,                    | 712:9, 712:12,        | C  |
| 684:10, 690:20,        | 725:14                                  | 712:18, 716:4,        | (  |
| 691:1, 691:2,          | choose [1] - 737:4                      | 720:1, 720:2, 720:3,  | C  |
| 723:17, 724:5,         | choosing [1] - 695:22                   | 720:7, 722:15,        | C  |
| 724:21                 | chose [1] - 631:20                      | 722:16, 723:3,        |    |
| changed [2] - 715:9,   | CIGRAND [1] - 584:4                     | 726:5, 742:15,        | C  |
| 743:7                  | Cigrand [11] - 573:5,                   | 742:19, 743:3,        | (  |
| changes [18] - 597:1,  | 584:1, 584:2,                           | 744:24, 745:2,        | -  |
| 609:21, 609:22,        | 584:12, 584:14,                         | 745:17                | -  |
| 612:19, 613:4,         | 585:13, 585:15,                         | Class [3] - 708:20,   | -  |
| 617:25, 639:4,         | 585:17, 585:19,                         | 709:2, 709:3          | C  |
| 654:13, 663:19,        | 613:13, 657:2                           | class's [5] - 675:16, | -  |
| 668:18, 706:1,         | circumstance [1] -                      | 675:17, 694:7,        | С  |
| 708:3, 711:14,         | 713:14                                  | 702:14, 702:15        |    |
| 716:15, 716:18,        | circumstances [1] -                     | classes [15] - 678:4, | C  |
| 730:3, 731:20, 743:1   | 672:6                                   | 681:3, 686:11,        | ٠. |
| changing [1] - 724:19  | CIS [1] - 682:9                         | 686:12, 687:8,        | C  |
| channel [2] - 594:24,  | Cls [1] - 596:3                         | 687:9, 702:8,         |    |
| 595:7                  | cited [1] - 687:22                      | 706:24, 711:14,       | `` |
| channeled [1] -        | city [1] - 727:24                       | 712:6, 712:10,        | `  |
| 595:19                 | City [1] - 571:12                       | 715:22, 715:24,       | C  |
| channels [5] - 585:4,  | clarification [2] -                     | 716:10, 743:4         | "  |
| 585:25, 593:17,        |   | clause [1] - 616:22   | C  |
| 608:23                 | 719:5, 727:11<br>clarifications [1] -   | clear [6] - 612:8,    |    |
| Chapter [2] - 667:12,  |   | 612:21, 631:10,       | `` |
| 750:18                 | 742:13 clarify [4] - 576:19,            | 691:7, 696:16,        | C  |
| characteristics [1] -  | • | 747:14                | 1  |
| 679:13                 | 607:23, 620:14,                         | clearer [1] - 612:15  | (  |
| characterization [1] - | 620:21                                  | clearly [1] - 663:7   | C  |
| 680:8                  | clarity [2] - 632:17,                   | close [2] - 586:15,   | `  |
| characterize [3] -     | 633:4                                   | 602:14                | `  |
| 676:3, 676:15, 682:6   | class [72] - 652:3,                     | closed [15] - 575:4,  | `  |
| characterized [2] -    | 652:8, 653:3,                           | 576:2, 586:22,        | `  |
| 682:2, 684:3           | 653:16, 653:17,                         | 613:25, 655:14,       |    |
| charge [9] - 610:25,   | 653:21, 653:22,                         | 704:3, 738:4, 738:5,  | '  |
| 630:5, 694:21,         | 660:13, 675:19,                         | 739:20, 739:22,       | -  |
| 695:13, 695:23,        | 675:22, 675:23,                         | 741:6, 741:13,        | -  |
| 695:24, 696:25,        | 676:11, 678:15,                         | 741:15, 749:21,       |    |
| 697:18, 699:7          | 679:18, 680:22,                         | 750:18                | C  |
| charged [1] - 695:10   | 681:4, 683:3,                           | closed-session [1] -  |    |
| ChargePoint [1] -      | 683:16, 684:18,                         | 741:6                 | C  |
| 571:19                 | 684:20, 685:17,                         | closely [2] - 601:8,  |    |
| charges [14] - 695:12, | 686:5, 686:9,                           | 602:13                | C  |
| 711:7, 712:15,         | 687:19, 688:8,                          | closer [3] - 578:2,   |    |
| 1 1 1.1, 1 12.10,      | 690:1, 690:4,                           | . ,                   | '  |
|                        | 1                                       | 1                     | 1  |

635:18, 680:14 commissions [2] cloud [6] - 656:14, 583:7, 641:2 656:15, 656:18, common [3] - 605:22, 656:25, 657:4, 681:7, 696:13 657:12 communicated [1] cloud-based [2] -619:19 656:18, 657:4 communication [4] -Club [1] - 571:8 591:6, 593:23, **co** [1] **-** 642:12 603:20, 612:19 Code [3] - 622:11, communications [1] -735:10, 750:18 612:8 oincident [2] community [3] -675:21, 675:23 625:19, 730:23 collected [3] - 657:8, companies [9] -657:9, 685:16 580:20, 583:5, collection [1] - 687:17 639:15, 639:21, 640:2, 640:9, 642:1, collections [2] -643:4, 737:7 609:23, 611:2 College [8] - 577:24, COMPANY [1] - 569:7 625:18, 719:10, company [14] -579:25, 602:14, 720:3, 720:7, 633:23, 641:21, 720:11, 725:24, 655:6, 659:24, 726:3 660:22, 661:13, olloquially [1] -702:17 664:21, 665:2, Colorado [2] - 571:10, 665:5, 681:9, 682:9, 571:24 701:7 Company [6] - 577:3, column [3] - 702:4, 580:21, 584:6, 702:6, 723:5 656:3, 709:21, 742:3 combination [5] -583:13, 641:14, company's [2] -641:17, 641:18, 575:23, 697:22 641:20 comparable [1] combined [2] - 678:7, 747:16 compare [1] - 723:14 678:18 compared [6] coming [6] - 591:5, 635:22, 639:17, 595:16, 600:21, 639:19, 640:11, 619:10, 627:4, 717:7 comment [2] - 602:2, 670:12, 728:17 comparing [3] - 643:9, 624:15 712:13 comments [17] -585:5, 590:9, comparison [3] -629:24, 667:23, 610:11, 610:16, 668:9 624:19, 624:23, 625:1, 625:8, comparisons [1] -625:10, 625:17, 643:3 competing [1] - 737:7 625:24, 668:3, 724:4, 724:13, competitive [4] -726:6, 743:20, 735:16, 735:18, 744:11 740:17, 746:24 COMMERCE [1] competitor [4] -569:1 740:18, 740:19 complaint [12] - 586:9, ommercial [1] -605:24 586:14, 586:16, :ommercial/ 596:18, 601:17, industrial [1] -601:22, 601:24, 610:17 602:15, 602:22,

|                        | 1                                     | T                                    | T   | 1                    |
|------------------------|---------------------------------------|--------------------------------------|---|----------------------|
| 609:13, 610:14,        | computing [1] -                       | congruent [1] -                      | 653:24, 665:24,                             | 675:6, 676:6, 676:7, |
| 664:24                 | 580:10                                | 687:14                               | 667:3                                       | 677:10, 677:17,      |
| complaints [39] -      | concede [1] - 713:16                  | connect [3] - 599:25,                | contested [1] - 653:7                       | 678:5, 681:10,       |
| 585:5, 585:22,         | concentrated [1] -                    | 600:4, 611:5                         | context [9] - 616:25,                       | 681:18, 682:25,      |
| 585:25, 586:5,         | 584:23                                | consecutive [2] -                    | 646:10, 647:24,                             | 683:11, 684:14,      |
| 586:6, 586:10,         | Concentric [1] -                      | 748:1, 748:2                         | 648:3, 648:6,                               | 684:20, 687:20,      |
| 586:21, 587:9,         | 727:24                                | consequently [1] -                   | 648:15, 652:24,                             | 688:1, 688:22,       |
| 587:11, 589:7,         | concern [10] - 619:4,                 | 717:14                               | 683:17, 685:5                               | 689:12, 690:12,      |
| 589:9, 590:7,          | 626:19, 644:12,                       | conservation [1] -                   | continuation [1] -                          | 691:12, 691:17,      |
| 590:13, 590:20,        | 714:22, 730:14,                       | 720:18                               | 743:25                                      | 693:7, 695:25,       |
| 590:22, 591:4,         | 734:25, 735:3,                        | consider [6] - 581:4,                | continue [4] - 607:10,                      | 697:19, 697:25,      |
| 591:11, 591:15,        | 737:1, 740:16,                        | 625:24, 644:16,                      | 682:8, 731:19,                              | 706:15, 706:19,      |
| 592:1, 596:9,          | 740:22                                | 653:3, 659:4, 700:2                  | 741:23                                      | 706:24, 707:10,      |
| 596:12, 596:14,        | concerned [7] -                       | considerably [1] -                   | continues [2] -                             | 707:23, 709:4,       |
| 596:16, 596:22,        | 610:15, 650:6,                        | 661:1                                | 615:14, 615:17                              | 711:9, 713:1, 713:4, |
| 597:4, 597:7,          | 651:6, 664:13,                        | consideration [5] -                  | continuity [1] - 608:25                     | 725:16, 728:13,      |
| 601:14, 601:15,        | 665:1, 689:3, 737:9                   | 592:12, 624:23,                      | contours [1] - 740:25                       | 728:19, 735:2,       |
| 602:1, 602:10,         | concerning [4] -                      | 648:21, 679:25,                      | contract [2] - 742:24,                      | 735:7, 735:19,       |
| 609:6, 609:11,         | 674:12, 680:19,                       | 687:1                                | 743:6                                       | 736:14, 736:15,      |
| 609:12, 609:18,        | 734:22, 737:24                        | considered [4] -                     |   | 746:2                |
| 610:10, 611:15,        | concerns [4] - 644:7,                 |                                      | <b>contracts</b> [2] - 602:9, 747:9         | Correct [1] - 628:18 |
| 612:2, 612:5, 664:14   | 644:11, 689:18,                       | 594:3, 604:25,                       |   | correction [6] -     |
| complaints@            | 736:23                                | 623:8, 630:6                         | contractual [1] -                           | 663:21, 710:8,       |
| alliantenergy.com      | concluded [1] -                       | considers [1] - 635:13               | 650:24                                      | 710:11, 710:12,      |
| [1] - 589:10           | 751:10                                | consistency [2] -                    | controllable [1] -                          | 710:13, 710:17       |
| complete [3] - 606:18, | concluding [1] -                      | 580:25, 660:11                       | 669:24                                      | corrections [11] -   |
| 704:2, 774:11          | 664:12                                | consistent [11] -                    | <b>controlled</b> [1] - 669:25              | 614:25, 621:22,      |
| completely [3] -       |                                       | 589:13, 612:1,                       | convention [1] -                            | 639:4, 663:19,       |
| 628:7, 659:23,         | <b>conclusion</b> [1] - 664:18        | 615:2, 622:13,                       | 682:17                                      | 663:25, 664:1,       |
| 708:15                 |                                       | 623:19, 623:23,                      | conversation [5] -                          | 675:1, 706:1, 710:6, |
| completes [1] -        | conclusions [1] - 727:17              | 628:9, 636:15,                       | 659:14, 717:8,                              | 718:18, 730:4        |
| 615:22                 | condition [1] - 745:7                 | 636:16, 650:11,<br>650:15            | 741:11, 742:14,                             | corresponding [2] -  |
| completion [1] -       |                                       |                                      | 746:15                                      | 582:6, 702:5         |
| 602:22                 | <b>conditions</b> [2] - 641:9, 748:10 | consolidated [1] -<br>640:2          | conversations [2] -                         | cost [90] - 581:7,   |
| complicated [1] -      | conduct [2] - 575:6,                  | consolidation [1] -                  | 600:14, 740:25<br><b>cook</b> [3] - 673:12, | 581:8, 581:9,        |
| 734:3                  | 576:20                                | 639:22                               | 673:21, 702:25                              | 581:11, 582:3,       |
| complies [2] - 711:3,  | conference [3] -                      | consolidations [1] -                 | COOK [5] - 570:8,                           | 618:13, 628:22,      |
| 712:3                  | 658:6, 659:21,                        | 642:9                                | 673:14, 673:23,                             | 629:7, 631:18,       |
| component [6] -        | 738:11                                | construct [2] - 649:10,              | 675:8, 703:1                                | 631:19, 632:8,       |
| 650:18, 676:10,        | confidence [1] - 630:1                | 651:6                                | · ·   | 644:18, 645:6,       |
| 679:18, 712:21,        | confident [1] - 717:2                 | consultant [1] - 716:2               | copied [1] - 627:14                         | 645:17, 646:5,       |
| 712:24                 | confidential [19] -                   | Consumer [12] -                      | <b>copies</b> [2] - 642:13, 749:5           | 646:7, 647:12,       |
| components [3] -       | 575:6, 575:7, 605:1,                  | 570:7, 614:9,                        |   | 648:19, 648:20,      |
| 605:15, 607:6,         | 635:24, 636:3,                        | 614:19, 621:8,                       | Corp [1] - 571:17                           | 649:1, 649:4,        |
| 698:20                 |                                       |                                      | correct [69] - 579:8,                       | 649:15, 649:18,      |
| composes [1] -         | 651:1, 655:11,<br>659:5, 701:10,      | 621:18, 624:6,<br>624:8, 638:16,     | 579:23, 580:7,                              | 652:2, 652:3, 652:8, |
| 639:24                 | 740:1, 740:12,                        | 663:3, 673:17,                       | 580:11, 580:12,                             | 653:17, 653:21,      |
| composite [2] -        | 740.1, 740.12, 747:6, 747:10,         | 674:2, 674:4                         | 582:5, 602:25,<br>617:13, 620:9,            | 653:22, 653:23,      |
| 676:15, 688:25         | 747.0, 747.10, 749:21, 750:7,         |                                      | , ,   | 659:1, 660:1,        |
| comprehensive [1] -    | 750:9, 750:22,                        | <b>consumers</b> [2] - 624:7, 636:16 | 626:2, 632:23,                              | 660:13, 661:19,      |
| 733:14                 | 750.9, 750.22,<br>751:5, 751:9        | contact [3] - 604:5,                 | 634:17, 637:1,                              | 670:8, 672:21,       |
| compromise [5] -       | confirm [2] - 652:14,                 | 604:10, 664:21                       | 637:2, 648:14,<br>649:15, 651:19,           | 672:25, 673:4,       |
| 623:2, 623:4,          | 677:16                                | contained [1] - 751:8                | 651:24, 652:22,                             | 676:2, 680:23,       |
| 623:13, 624:1, 624:4   | confirmed [1] - 657:2                 | contains [2] - 674:15,               | 653:1, 654:2, 654:5,                        | 681:4, 683:23,       |
| compute [1] - 580:1    | confusing [2] -                       | 674:19                               | 664:16, 665:12,                             | 687:19, 688:8,       |
| computer [2] - 594:19, | 595:15, 606:14                        | contention [5] -                     | 665:23, 666:20,                             | 688:19, 690:1,       |
| 594:22                 | confusion [1] - 600:22                | 644:25, 652:7,                       | 666:21, 666:25,                             | 691:21, 695:2,       |
|                        | 30111d31011[1] - 000.22               | 044.23, 032.1,                       | 300.21, 000.20,                             |                      |
| L                      | 1                                     | L                                    | L   | 1                    |

|                              | 1                                  |                        |                       |   |
|------------------------------|------------------------------------|------------------------|-----------------------|---|
| 696:4, 696:5, 696:7,         | 683:24, 684:6,                     | 574:2, 579:1, 631:5,   | 610:19, 611:3,        | 609:24, 610:6,                                  |
| 696:18, 696:23,              | 684:14, 688:21,                    | 651:16, 670:23,        | 611:22, 612:16,       | 610:12, 610:17,                                 |
| 697:7, 700:1,                | 689:6, 689:11,                     | 675:11, 688:16,        | 613:1, 613:2, 613:8,  | 610:22, 611:7,                                  |
| 700:15, 702:22,              | 689:15, 689:19,                    | 693:2, 706:8,          | 618:15, 619:21,       | 611:19, 612:8,                                  |
| 706:13, 702:22,              | 689:22, 689:25,                    | 710:20, 734:19         | 620:10, 620:11,       | 612:11, 613:11,                                 |
| 707:16, 708:7,               | , ,                                | cross [20] - 576:20,   | 624:15, 633:25,       | 1   |
| 707.10, 708.7,               | 690:2, 690:21,                     |                        | · · · · · ·           | 616:18, 617:20,                                 |
|                              | 691:3, 691:6,                      | 578:23, 579:5,         | 636:11, 645:23,       | 617:24, 618:5,                                  |
| 713:22, 713:25,              | 694:23, 694:24,                    | 581:16, 616:4,         | 645:24, 647:8,        | 618:9, 619:7,                                   |
| 714:8, 714:23,               | 695:1, 695:5, 695:8,               | 616:6, 622:5, 639:9,   | 653:2, 653:3,         | 619:11, 619:15,                                 |
| 716:2, 716:3, 716:5,         | 695:14, 696:7,                     | 675:9, 706:5,          | 653:16, 659:16,       | 619:22, 620:6,                                  |
| 716:22, 717:15,              | 696:9, 698:2, 698:3,               | 718:22, 718:23,        | 664:24, 682:5,        | 624:12, 626:15,                                 |
| 720:9, 720:13,               | 698:14, 698:22,                    | 734:25, 735:10,        | 682:10, 683:3,        | 630:5, 633:20,                                  |
| 720:24, 722:18,              | 698:23, 698:25,                    | 736:17, 736:22,        | 683:16, 687:9,        | 633:21, 634:2,                                  |
| 722:20, 723:3,               | 699:17, 702:3,                     | 737:2, 737:5, 737:9    | 702:1, 702:2, 702:8,  | 634:5, 636:5, 636:7,                            |
| 723:8, 723:11,               | 706:17, 706:22,                    | CROSS-                 | 706:18, 706:19,       | 636:13, 637:8,                                  |
| 723:21, 725:15,              | 706:23, 711:18,                    | EXAMINATION [10] -     | 706:21, 706:24,       | 637:11, 637:16,                                 |
| 726:5, 742:15,               | 714:11, 715:21,                    | 579:1, 631:5,          | 707:8, 707:18,        | 644:19, 645:1,                                  |
| 742:19, 744:24,              | 715:23, 735:12,                    | 651:16, 670:23,        | 708:9, 709:1,         | 646:4, 646:17,                                  |
| 745:2, 745:12,               | 735:25                             | 675:11, 688:16,        | 716:10, 726:3,        | 646:19, 647:4,                                  |
| 745:16                       | couch [1] - 689:18                 | 693:2, 706:8,          | 730:24, 734:9,        | 647:5, 647:6,                                   |
| cost-based [5] -             | <b>counsel</b> [2] - 693:5,        | 710:20, 734:19         | 740:9, 740:12,        | 648:11, 648:12,                                 |
| 713:22, 713:25,              | 700:10                             | cross-examination [6]  | 740:14, 740:15,       | 648:23, 651:8,                                  |
| 714:8, 716:3, 725:15         | Counsel [13] - 577:2,              | - 576:20, 581:16,      | 740:17, 740:24,       | 652:12, 653:11,                                 |
| <b>cost-of</b> [4] - 660:13, | 584:5, 614:8, 621:7,               | 616:4, 622:5, 675:9,   | 741:2, 742:16,        | 664:12, 664:19,                                 |
| 676:2, 723:8, 742:15         | 638:15, 656:2,                     | 706:5                  | 742:20, 742:25,       | 665:1, 666:18,                                  |
| cost-of-service [17] -       | 663:2, 673:16,                     | cross-examine [1] -    | 745:9, 745:14,        | 666:23, 672:4,                                  |
| 652:8, 653:17,               | 705:13, 709:20,                    | 616:6                  | 745:22, 745:24,       | 678:9, 682:14,                                  |
| 680:23, 681:4,               | 718:2, 729:17, 742:2               | cross-subsidization    | 746:22                | 686:1, 686:12,                                  |
| 690:1, 691:21,               | <b>couple</b> [7] <b>-</b> 688:15, | [6] - 734:25, 736:17,  | Customer [5] -        | 693:16, 695:10,                                 |
| 702:22, 707:9,               | 695:17, 697:15,                    | 736:22, 737:2,         | 708:20, 709:2,        | 695:14, 695:22,                                 |
| 707:16, 708:7,               | 715:17, 720:23,                    | 737:5, 737:9           | 709:3, 740:1, 749:8   | 697:5, 698:17,                                  |
| 708:19, 720:9,               | 733:4, 742:13                      | <b>CSI</b> [2] - 702:3 | customer's [3] -      | 699:9, 699:11,                                  |
| 720:13, 720:24,              | <b>course</b> [4] - 575:25,        | current [12] - 593:21, | 595:6, 597:17,        | 699:13, 699:18,                                 |
| 722:18, 742:19,              | 606:18, 659:17,                    | 619:13, 651:6,         | 669:24                | 721:23, 724:23,                                 |
| 745:12                       | 715:25                             | 667:13, 669:17,        | customer-facing [1] - | 725:5, 725:13,                                  |
| costs [83] - 599:5,          | court [1] - 774:4                  | 669:18, 680:10,        | 584:23                | 725:21, 725:24,                                 |
| 617:17, 617:21,              | Court [1] - 570:8                  | 685:10, 687:17,        | customer-friendly [1] | 726:7, 732:13,                                  |
| 618:8, 631:16,               | <b>cover</b> [1] - 632:5           | 689:17, 699:5,         | - 613:8               | 734:5, 737:2, 737:3,                            |
| 644:22, 645:1,               | Cranberries [1] -                  | 713:21                 | customers [117] -     | 737:25, 740:2                                   |
| 645:6, 645:22,               | 644:4                              | customer [94] -        | 586:7, 586:12,        | customers' [1] -                                |
| 646:16, 647:15,              | create [3] - 608:22,               | 584:16, 584:23,        | 588:20, 591:18,       | 624:10  |
| 647:18, 648:7,               | 642:23, 731:4                      | 585:1, 585:2, 585:5,   | 591:21, 592:10,       | customized [2] -                                |
| 648:8, 648:11,               | created [1] - 575:21               | 585:11, 585:21,        | 592:13, 593:2,        | 659:23, 660:1                                   |
| 648:21, 648:22,              | creates [1] - 659:15               | 585:25, 586:11,        | 593:19, 593:21,       | cut [4] - 582:12,                               |
| 649:14, 650:2,               | creating [1] - 706:14              | 586:16, 587:8,         | 594:3, 594:6,         | 711:17, 716:12,                                 |
| 650:6, 650:11,               | credence [1] - 687:3               | 588:13, 588:24,        | 594:18, 595:3,        | 717:16  |
| 651:3, 651:18,               | credit [7] - 637:4,                | 591:1, 591:23,         | 595:10, 595:15,       | cutting [1] - 599:5                             |
| 651:21, 651:23,              | 724:15, 724:21,                    | 592:7, 593:8, 595:1,   | 595:22, 597:2,        | <b>cycle</b> [2] - 672:21,                      |
| 652:11, 652:21,              | 724:22, 726:10,                    | 596:22, 599:17,        | 597:8, 599:20,        | 672:25  |
| 653:5, 653:16,               | 726:11, 726:13                     | 599:18, 600:1,         | 600:2, 600:25,        |   |
| 654:12, 660:6,               | credits [6] - 637:1,               | 601:18, 602:2,         | 601:10, 602:13,       | D   |
| 680:20, 680:22,              | 637:7, 648:17,                     | 602:8, 602:16,         | 603:4, 603:14,        |   |
| 680:25, 681:2,               | 724:8, 724:11,                     | 602:18, 602:25,        | 603:21, 603:25,       | D C (4) = 570·20                                |
| 681:8, 681:14,               | 724:19                             | 603:17, 604:5,         | 604:8, 604:23,        | <b>D.C</b> [1] - 570:20 <b>DAG</b> [2] - 574:3, |
| 681:17, 681:20,              | criteria [3] - 634:14,             | 605:2, 605:12,         | 605:5, 606:14,        | 717:24  |
| 682:24, 683:2,               | 672:24, 672:25                     | 606:11, 607:9,         | 608:10, 608:15,       | DANIEL [1] - 570:18                             |
| 683:10, 683:20,              | CROSS [12] - 573:2,                | 609:4, 610:15,         | 608:17, 608:25,       |   |
|                              |                                    |                        |                       |   |
|                              |                                    |                        |                       |   |

| <b>Daniels</b> [1] - 709:20                    | <b>decide</b> [2] - 683:7,            | 645:15, 646:7                    | 660:10, 701:24                    | 684:12, 684:19,                               |
|--|---------------------------------------|----------------------------------|-----------------------------------|---|
| <b>DANIELS</b> [1] - 569:25                    | 692:5                                 | derive [2] - 702:13,             | deviation [1] - 582:9             | 686:17, 686:20,                               |
| Data [2] - 677:12,                             | decided [6] - 605:18,                 | 702:16                           | deviations [1] -                  | 686:23, 690:12,                               |
| 683:13   | 651:19, 651:24,                       | <b>Des</b> [12] - 569:12,        | 582:11                            | 690:17, 705:23,                               |
| data [23] - 592:11,                            | 653:15, 666:18,                       | 570:9, 570:14,                   | device [1] - 594:22               | 710:1, 710:9, 711:2,                          |
| 629:8, 634:14,                                 | 692:3                                 | 570:17, 570:23,                  | <b>DG</b> [1] - 652:18            | 712:2, 718:11,                                |
| 657:7, 657:11,                                 | deciding [1] - 625:5                  | 571:4, 571:7,                    | dialogue [1] - 700:9              | 719:16, 720:9,                                |
| 659:9, 661:8,                                  | decision [2] - 687:23,                | 571:16, 571:21,                  | difference [9] -                  | 720:17, 722:25,                               |
| 661:14, 661:25,                                | 725:15                                | 572:4, 572:6, 774:13             | 587:22, 605:20,                   | 724:5, 728:6,                                 |
| 662:1, 662:10,                                 | decisions [1] - 583:8                 | describe [6] - 675:13,           | 637:5, 648:1, 698:8,              | 729:24, 731:7,                                |
| 667:16, 669:21,                                | declaring [1] - 675:4                 | 677:18, 680:21,                  | 698:12, 700:24,                   | 734:24  |
| 669:25, 678:8,                                 | decline [1] - 592:1                   | 701:5, 719:11,                   | 723:20, 748:25                    | DIRECT [13] - 573:2,                          |
| 678:25, 679:11,                                | Decorah [7] - 571:2,                  | 730:19                           | differences [1] -                 | 574:2, 577:17,                                |
| 686:3, 686:6,                                  | 625:17, 625:20,                       | describes [1] - 627:24           | 723:15                            | 584:10, 614:14,                               |
| 686:10, 689:2,                                 | 625:22, 718:2,                        | describing [1] -                 | different [25] - 586:18,          | 621:13, 638:22,                               |
| 689:3, 689:4                                   | 727:15, 727:22                        | 717:10                           | 588:19, 589:4,                    | 663:12, 673:22,                               |
| data-request [1] -                             | decrease [6] - 618:16,                | Description [1] -                | 601:19, 601:20,                   | 705:18, 710:4,                                |
| 662:10   | 618:18, 620:6,                        | 590:16                           | 608:23, 611:20,                   | 718:8, 729:21                                 |
| date [3] - 599:14,                             | 620:12, 721:25,                       | description [1] -                | 624:9, 646:12,                    | Direct [4] - 579:10,                          |
| 710:15, 739:12                                 | 723:8                                 | 706:20                           | 685:7, 685:11,                    | 579:15, 683:12,                               |
| Dated [1] - 774:13                             | decreased [2] - 619:9,                | deserved [1] - 583:12            | 691:20, 701:12,                   | 690:6   |
| dated [1] - 659:12                             | 619:16                                | design [9] - 623:12,             | 701:25, 707:10,                   | direction [2] - 658:9,                        |
| dates [1] - 739:10                             | decreasing [1] -                      | 653:23, 661:5,                   | 707:22, 708:12,                   | 774:10  |
| <b>DAVID</b> [3] - 571:11,                     | 721:17                                | 698:24, 707:20,                  | 709:1, 720:15,                    | directional [1] - 659:5                       |
| 718:1, 742:1                                   | dedicated [3] - 586:2,                | 708:21, 725:3,                   | 722:17, 723:10,                   | directionally [1] -                           |
| David [4] - 573:7,                             | 595:17, 595:25                        | 725:5, 725:8                     | 746:14, 747:19,                   | 575:25  |
| 574:4, 717:24,                                 | deep [1] - 606:2                      | designed [4] - 647:22,           | 747:21, 747:23                    | directly [6] - 586:8,                         |
| 718:10   | default [1] - 672:24                  | 660:9, 706:14,                   | differential [3] -                | 602:16, 666:23,                               |
| <b>DAVISON</b> [1] - 673:15                    | deficiencies [1] -                    | 710:23                           | 722:14, 724:12,                   | 681:1, 735:12,                                |
| <b>Davison</b> [15] - 573:18,                  | 685:16                                | desire [1] - 715:25              | 727:6                             | 735:24  |
| 651:25, 652:15,                                | definitely [1] - 742:18               | desktop [2] - 594:21,            | differentials [1] -               | director [2] - 584:16,                        |
| 653:9, 654:22,                                 | <b>definition</b> [1] - 667:15        | 608:24                           | 724:6                             | 585:1   |
| 673:14, 673:25,                                | <b>degree</b> [1] - 584:20            | detail [2] - 628:21,             | differentiate [2] -               | disadvantage [1] -<br>746:24                  |
| 675:8, 675:13,                                 | degrees [1] - 642:22                  | 719:11                           | 722:21, 722:22                    |   |
| 677:10, 680:18,                                | delineated [1] -                      | details [1] - 657:6              | differently [8] -                 | <b>disagree</b> [3] - 680:7,<br>695:10, 728:3 |
| 693:4, 694:19,                                 | 701:21                                | determination [2] -              | 601:14, 660:1,                    | disagreed [1] - 734:5                         |
| 703:2, 743:11<br><b>Davison's</b> [1] - 714:22 | <b>delivered</b> [3] - 646:3,         | 630:5, 649:15                    | 682:20, 683:10,<br>683:25, 715:9, | disagreement [1] -                            |
|  | 647:2, 647:4                          | determine [14] -                 | 715:11, 720:10                    | 695:11  |
| <b>days</b> [2] - 599:13,<br>611:5             | delta [2] - 675:22,                   | 592:16, 597:16,                  | difficult [6] - 591:20,           | disavow [1] - 727:16                          |
| <b>DCF</b> [14] - 579:9,                       | 698:18                                | 598:9, 598:11,<br>598:23, 599:9, | 607:8, 681:2, 683:5,              | disconnect [3] -                              |
| 580:5, 580:10,                                 | demand [5] - 605:17,                  | 634:15, 675:24,                  | 683:17, 701:8                     | 599:16, 599:17,                               |
| 581:5, 583:4, 583:7,                           | 689:8, 702:11,                        | 680:16, 713:15,                  | difficulty [4] - 626:12,          | 599:19  |
| 583:10, 583:11,                                | 724:22, 725:7<br>demand-related [1] - | 742:21, 744:12,                  | 627:7, 627:20, 662:3              | disconnected [1] -                            |
| 640:21, 641:3,                                 | 724:22                                | 745:14, 745:17                   | digit [1] - 659:7                 | 611:4   |
| 641:4, 641:8,                                  |                                       | determined [6] -                 | digits [1] - 659:7                | disconnection [1] -                           |
| 641:13, 642:3                                  | <b>denominator</b> [1] - 699:15       | 624:13, 637:23,                  | dimension [1] -                   | 599:9   |
| deal [1] - 603:5                               | <b>Denver</b> [2] - 571:10,           | 649:4, 649:5, 714:7,             | 707:24                            | disconnections [1] -                          |
| dealing [7] - 575:6,                           | 571:24                                | 739:14                           | direct [39] - 578:10,             | 599:4   |
| 642:20, 647:20,                                | DEPARTMENT[1] -                       | determining [3] -                | 578:16, 580:6,                    | discourage [1] -                              |
| 648:12, 648:15,                                | 569:1                                 | 644:21, 688:19,                  | 614:22, 615:12,                   | 725:21  |
| 732:10   | department [1] -                      | 689:5                            | 615:15, 618:25,                   | discouragement [1] -                          |
| deals [1] - 682:10                             | 586:18                                | detriment [1] - 693:23           | 621:19, 629:24,                   | 727:6   |
| dealt [2] - 628:11,                            | depended [1] - 600:5                  | develop [1] - 603:10             | 638:25, 654:1,                    | discouraging [1] -                            |
| 662:10   | deploying [1] - 671:13                | developed [1] -                  | 663:16, 663:22,                   | 726:25  |
| debt [4] - 581:7,                              | deployment [2] -                      | 680:22                           | 672:18, 674:6,                    | discovery [2] -                               |
| 581:9, 581:11, 582:3                           | p,[2]                                 | development [2] -                | 674:15, 675:2,                    | 650:21, 672:22                                |
|  |                                       |                                  | _                                 |   |
|  |                                       |                                  |                                   |   |

| discuss [3] - 617:15,       |
|-----------------------------|
| 630:4, 731:20               |
| discussed [6] - 662:6,      |
| 670:7, 700:4, 700:9,        |
| 700:14, 711:5               |
| discussing [1] -            |
| 629:10                      |
| discussion [7] -            |
| 647:14, 655:9,              |
| 669:12, 713:10,             |
| 713:17, 727:12,             |
| 743:11                      |
| disparity [2] - 728:7,      |
| 728:22                      |
| displays [1] - 670:1        |
| disregard [1] - 642:24      |
| distance [1] - 713:25       |
| distinguish [1] -           |
| 681:14                      |
| distinguishable [1] -       |
| 681:17                      |
| distinguished [1] -         |
| 577:23                      |
| distributed [2] -           |
| 644:9, 725:22               |
| distribution [13] -         |
| 636:8, 640:4, 643:1,        |
| 645:12, 647:3,              |
| 647:10, 668:22,             |
| 671:1, 671:11,              |
| 671:12, 671:17,             |
| 673:6, 702:1                |
| dive [1] - 606:2            |
| divide [1] - 702:15         |
| divided [1] - 728:15        |
| dividing [1] - 675:19       |
| division [1] - 588:11       |
| <b>DIVISION</b> [1] - 569:2 |
| Docket [4] - 581:17,        |
| 590:15, 710:15,             |
| 724:13                      |
| docket [13] - 576:21,       |
| 578:10, 582:19,             |
| 644:15, 646:11,             |
| 646:12, 652:22,             |
| 652:24, 683:4,              |
| 705:24, 724:14,             |
| 743:25, 749:9               |
| <b>DOCKET</b> [1] - 569.6   |
| document [6] -              |
| 575:19, 575:21,             |
| 576:3, 581:12,              |
| 701:22, 749:9               |
| dog [1] - 592:5             |
| dollar [1] - 691:11         |
| dollars [1] - 605:23        |
|                             |

```
done [22] - 652:20,
 654:8, 654:22,
 655:6, 655:10,
 658:18, 658:21,
 661:1, 668:11,
 670:10, 682:19,
 682:20. 683:9.
 685:21. 687:20.
 692:8, 708:1,
 716:14, 716:18,
 719:12, 720:18,
 750:9
double [2] - 677:23,
 726:12
double-sided [1] -
 677:23
doubt [2] - 622:7,
 636:20
down [26] - 583:21,
 592:7, 599:5, 603:8,
 613:15, 617:1,
 617:8, 621:1, 638:8,
 642:16, 654:18,
 661:3, 662:17,
 673:10, 678:11,
 678:12, 701:19,
 703:3, 707:15,
 709:13, 717:20,
 721:18, 722:10,
 729:9, 737:17,
 749:22
Dr [19] - 576:10,
 576:20, 576:23,
 577:19, 578:6,
 578:22, 579:3,
 579:8, 579:14,
 583:3, 639:11,
 641:10. 705:6.
 705:20, 706:10,
 706:12, 708:17,
 719:1, 727:13
DR [1] - 705:9
dr [1] - 581:15
Drive [1] - 570:10
driving [1] - 679:14
DUBLINSKE [1] -
 571:13
due [12] - 598:19,
 599:13, 599:14,
 617:18, 619:16,
 620:8, 662:2,
 708:20, 717:13,
 738:16, 739:12
due-date [1] - 599:14
Duke [1] - 580:22
duly [13] - 577:3,
```

584:6, 614:9, 621:8,

```
638:16, 656:3,
663:3, 673:17,
705:14, 709:21,
718:3, 729:18, 742:3
DUNBAR [1] - 571:22
duration [1] - 598:1
during [4] - 602:1,
604:6, 609:18,
672:22
dwindling [2] -
580:20, 583:5
Dyer's [1] - 671:2
```

634:20 e-mail [2] - 586:3, 589:10 EFS [1] - 617:6 earn [1] - 637:8 earning [1] - 637:10 eight [2] - 728:11, easier [4] - 599:5, 728:16 608:15, 608:17, either [3] - 599:22, 610:5 631:22, 716:13 easily [3] - 610:23, elect [1] - 695:4 681:17, 684:8 **EASLER** [16] - 570:7, 614:4, 614:15, 616:3, 618:22, 578:9, 583:13, 618:24, 620:2, 611:11, 639:19, 621:3, 621:5, 640:22, 641:18, 621:14, 622:4, 642:9, 642:15, 634:24, 636:18, 679:24, 687:2 638:6, 654:24, 739:2 Electric [1] - 749:7 Easler [12] - 614:3, 614:13, 618:20, 621:3, 621:12, electronically [1] -630:25, 633:6, 600.13 634:22, 638:4, elects [1] - 681:5 654:20, 662:19, 739:1 623:24, 687:12 East [5] - 569:12, 570:5, 570:8, 622:15, 636:21, 571:11, 571:15 648:25, 651:7 easy [3] - 607:11, 681:14, 719:14 696:7 economic [1] - 682:4 eliminated [2] -**EDIE** [1] - 569:25 580:15, 580:17 education [1] - 584:19 **EECR** [1] - 620:17 eliminating [1] effect [5] - 624:20, 725:11 625:11, 625:12, elimination [1] -625:18, 713:19 698:15 effective [2] - 634:20, eloquently [1] -744:10 746:12 effectively [2] -

616:17, 616:22, emergency [1] -617:11, 617:17, 588:23 617:19, 617:21, emeritus [1] - 577:22 617:22, 618:7, emphasis [2] - 641:2, 618:13, 619:8, 641.24 619:17, 619:24, employed [2] -620:9, 620:15, 614:18, 674:1 658:3, 660:10, employees [1] -661:14, 661:23, 607:25 733:9 employment [2] -Efficiency [3] -614:17, 621:16 617:16, 618:17, encompassed [1] -618:19 641:19 efficient [2] - 634:10, encountering [1] -603:3 efficiently [1] - 585:6 encourage [1] - 725:6 effortless [1] - 609:4 encourages [1] -725:4 egregious [1] - 725:14 encroachment [1] -730:15 end [8] - 592:22, 595:13, 612:14, 615:14, 658:19, 682:5, 702:12, elected [1] - 687:15 714:23 electing [1] - 699:10 end-use [1] - 682:5 electric [11] - 578:7, endeavors [1] - 609:3 ends [2] - 589:17, 615:21 energy [45] - 591:18, 591:22. 592:18. 616:16. 616:22. 617:10, 617:17, Electrical [1] - 572:2 617:19, 617:21, **electronic** [1] - 594:15 617:22, 618:7, 618:13, 619:8, 619:16, 619:24, 620:9, 620:11, 620:15, 645:9, element [3] - 623:18, 647:21, 648:17, 649:8, 650:15, elements [5] - 576:1, 650:16, 653:12, 720:11, 720:17, 720:19, 721:12, eliminate [2] - 581:10, 721:13, 721:19, 721:21, 721:25, 722:1, 722:4, 722:10, 722:12, eliminates [1] - 628:7 722:15, 724:23, 727:7, 732:20, 733:9 Energy [19] - 570:12, 571:18, 580:22, 584:15, 595:18, 606:6, 612:23, 617:16, 618:17, ELPC [1] - 654:6 618:19, 637:9, embark [1] - 661:17 649:20, 655:5,

665:23, 748:16

efficiency [19] -

655:9, 705:6, 705:13, 707:1, 727:24, 728:8 engaged [2] - 622:23, 622:24 enhanced [2] - 636:5, 636:6 enhancements [1] -636:12 ensure [6] - 595:25, 612:7, 634:2, 636:13, 658:21, 731:21 ensuring [2] - 585:5, 732:10 enter [1] - 593:13 entered [1] - 730:11 entering [1] - 599:22 enters [1] - 599:15 entire [7] - 598:23, 612:14, 625:19, 660:15, 694:8, 698:18, 716:19 entities [2] - 639:25, 735:2 entitled [1] - 774:5 entity [1] - 735:18 Environmental [5] -571:5, 574:5, 654:7, 729:18, 732:17 envision [1] - 726:2 equal [3] - 693:19, 715:12, 716:24 equally [3] - 682:4, 689:1, 715:1 equation [1] - 687:13 equitable [1] - 689:23 equity [5] - 581:8, 637:24, 686:17, 687:5, 687:23 ERIC [1] - 570:4 errors [1] - 605:22 escalate [2] - 586:17, 586:19 especially [5] -629:15, 629:18, 629:21, 697:12, 700:13 ESQ [22] - 570:2, 570:4, 570:7, 570:7, 570:8, 570:10, 570:12, 570:15, 570:18, 570:21, 571:2, 571:5, 571:5, 571:8, 571:11, 571:13, 571:14, 571:17, 571:19,

571:22, 572:2, 572:5 essence [1] - 647:4 essentially [4] - 619:6, 642:25. 644:18. 647:16 establish [1] - 668:19 established [3] -605:17, 649:10, 665:16 **estimated** [1] - 592:5 **estimates** [1] - 640:12 estimation [3] - 592:2, 652:20. 679:16 et [1] - 732:12 evaluate [1] - 645:18 evaluated [1] - 743:4 evaluation [3] - 646:8, 648:7, 650:13 evening [1] - 575:8 event [1] - 747:21 events [3] - 599:10, 667:14, 667:15 eventually [1] - 599:16 Eversheds [1] -570:18 everywhere[1] -701:4 evidence [5] - 583:2, 703:8, 703:15, 711:23, 749:16 evidenced [1] - 653:6 ex [1] - 642:12 ex-co-worker [1] -642:12 exact [1] - 642:18 exactly [3] - 601:9, 640:8, 698:9 examination [7] -576:20, 579:6, 581:16, 616:4, 622:5, 675:9, 706:5 **EXAMINATION**[27] -577:17, 579:1, 584:10, 607:20, 614:14, 618:23, 621:13, 631:5, 634:23, 638:22, 651:16, 663:12, 670:23, 672:11, 673:22, 675:11, 688:16, 693:2, 705:18, 706:8, 710:4, 710:20, 715:18, 718:8, 729:21, 734:19, 747:12

examine [1] - 616:6 examined [13] - 577:4, 584:7, 614:10, 621:9. 638:17. 656:4. 663:4. 673:18. 705:15. 709:22. 718:4. 729:19, 742:4 example [18] - 637:17, 669:23, 670:1. 681:23, 682:1, 692:11, 694:2, 708:5, 715:2, 716:23, 717:10, 717:17, 727:3, 728:9, 731:1, 746:21, 747:8, 747:18 exceeds [1] - 720:18 Excel [1] - 701:22 exception [3] - 646:4, 748:17, 748:22 excerpt [1] - 581:16 excess [13] - 675:17, 675:24. 676:10. 678:1, 678:3, 679:7, 679:8, 679:18, 680:9, 689:8, 690:20, 694:5, 702:11 exchange [1] - 684:2 excited [1] - 609:2 exclude [1] - 580:9 excluding [1] - 667:14 excuse [8] - 646:2, 669:16, 677:20, 693:22, 712:14, 734:24, 736:18, 743:15 Excuse [1] - 723:1 excused [13] - 583:24, 613:17, 621:2, 638:9, 654:19, 662:18, 673:11, 703:5, 709:15, 717:22, 729:11, 737:18, 750:2 executives [1] - 586:7 **EXHIBIT** [2] - 574:9, 574:13 Exhibit [17] - 579:14, 579:15, 582:18, 582:20, 583:1, 676:22, 677:14, 677:19, 677:21, 678:24, 683:13, 703:14, 719:2,

exhibit [10] - 581:13, 581:23, 582:24, 667:17, 676:19, 677:25, 719:2, 722:3, 729:1, 749:14 **EXHIBITS** [1] - 574:11 exhibits [14] - 579:9, 614:23, 621:20, 657:15, 663:17, 674:7, 705:24, 706:2, 710:2, 718:13, 718:16, 729:25, 730:10 Exhibits [5] - 579:10, 694:3, 703:10, 703:14, 719:16 existing [1] - 721:3 exists [3] - 636:1, 636:2, 726:2 exorbitant [1] - 724:23 expect [2] - 591:21, 592:20 expectations [2] -661:13, 661:24 expected [3] - 632:5, 635:21, 738:14 **expecting** [1] - 637:12 expended [1] - 671:23 expenditure [2] -631:16, 670:15 expenditures [1] -631:22 expense [9] - 631:23, 656:16, 656:19, 671:1, 681:5, 694:9, 697:6, 701:8 expenses [15] - 627:6, 631:21, 632:3, 632:4, 632:13, 632:17, 632:21, 650:19, 650:22, 680:17, 684:15, 701:11, 701:25, 735:13, 735:25 expensive [1] - 670:11 experience [3] -584:19, 593:8, 732:24 experiencing [1] -611:22 expert [3] - 606:8, 653:17, 720:25 expertise [1] - 602:11 experts [1] - 602:20 explain [13] - 584:25, 592:25, 601:2,

728:5, 749:6, 749:15 607:6, 607:9, 608:14, 619:4, 619:7, 622:16, 649:20, 696:3, 699:8, 726:18 explained [1] - 594:13 exploration [3] -639:25, 640:25, 641:11 explore [1] - 719:8 explored [3] - 692:9, 692:17, 692:18 **exploring** [1] - 692:2 export [1] - 720:11 exports [1] - 726:4 express [1] - 633:12 extend [1] - 714:19 extensive [2] - 591:17, 622:25 extent [3] - 694:22, 696:12, 740:20

# F

f) [1] - 750:19 face [1] - 609:24 Facebook [1] - 593:17 facility [2] - 720:5, 720:20 facing [2] - 584:23, 585:3 fact [15] - 600:24, 634:19, 637:15, 650:9, 679:23, 683:24, 685:9, 696:22, 706:19, 707:9, 708:21, 720:16. 726:1. 727:20, 727:23 factor [5] - 649:16, 678:18, 686:1, 686:12, 744:4 factors [1] - 712:16 facts [1] - 699:5 fair [4] - 640:11, 643:1, 678:24, 744:19 Fairfield [1] - 570:11 Fairgrounds [1] -569:10 fairly [6] - 588:10, 596:16, 670:11, 706:20, 721:21, 725:18 fall [1] - 671:24 falls [1] - 668:21

Footnote [2] - 710:13,

713:1

| familiar [13] - 589:19,  |
|--|
| 589:23, 590:5,   |
| 590:24, 591:9,   |
|  |
| 616:12, 616:16,  |
| 622:7, 636:20,   |
| 674:14, 701:2,   |
| 732:22, 733:8  |
| far [19] - 592:1,  |
| 595:14, 596:8,   |
| 611:11, 623:12,  |
| 630:21, 633:1,   |
| 633:17, 661:24,  |
|  |
| 669:18, 683:14,  |
| 683:16, 707:18,  |
| 716:5, 720:18,   |
| 723:5, 744:3, 745:4,   |
| 748:6  |
| farms [1] - 602:6  |
| favor [3] - 694:20,  |
| 733:25, 750:23   |
|  |
| feasibility [1] - 727:21   |
| features [6] - 665:25,   |
| 666:3, 666:5, 666:8,   |
| 666:12, 667:5  |
| February [1] - 710:16  |
| federal [1] - 648:25   |
| Federal [1] - 637:13   |
| feedback [1] - 612:16  |
|  |
| felt [2] - 624:10,   |
| 714:19   |
| FERC [8] - 581:10,   |
| 627:22, 627:23,  |
| 627:25, 628:1,   |
| 629:19, 629:22,  |
| 660:23   |
| few [15] - 585:24,   |
| 595:5, 598:10,   |
|  |
| 598:20, 598:21,  |
| 599:24, 600:18,  |
| 605:15, 607:22,  |
| 607:23, 607:24,  |
| 609:17, 632:18,  |
| 665:25, 719:8  |
| field [1] - 600:6  |
|  |
| fields' [1] - 627:24   |
| Fifth [1] - 571:6  |
| fifty [1] - 744:18   |
| figure [7] - 603:5,  |
| 636:4, 659:7, 680:5,   |
| 720:25, 747:18,  |
| 748:18   |
| 1 /40.10   |
|  |
| figures [2] - 679:6,   |
| <b>figures</b> [2] <b>-</b> 679:6, 720:16                                  |
| figures [2] - 679:6,<br>720:16<br>File [1] - 733:15                        |
| figures [2] - 679:6,<br>720:16<br>File [1] - 733:15<br>file [12] - 586:12, |
| figures [2] - 679:6,<br>720:16<br>File [1] - 733:15                        |
| figures [2] - 679:6,<br>720:16<br>File [1] - 733:15<br>file [12] - 586:12, |

```
742:15, 742:22,
                           First [1] - 570:3
 744:9, 744:23,
                           fit [2] - 629:1, 738:19
 744:25, 745:1, 747:9
filed [21] - 578:9,
 578:16, 589:20,
 610:11, 614:22,
 621:19. 623:14.
 638:24. 663:14.
 664:2, 667:16,
 668:3, 672:18,
 674:7, 675:5,
 705:23, 710:3,
 718:11, 729:23,
 747:7, 747:10
files [4] - 596:3, 602:3,
 605:6, 610:13
filing [6] - 619:14,
 664:24, 683:3,
 742:23, 745:8, 746:6
filings [2] - 745:6,
 747:6
final [12] - 623:24,
 669:3, 676:12,
 676:16, 687:1,
 687:6, 687:7,
 687:16, 689:5,
 714:2, 717:2, 724:14
finally [2] - 668:14,
 699:3
finance [1] - 577:22
financial [3] - 587:22,
 658:14, 661:21
fine [4] - 613:21,
 738:25, 739:2,
 748:16
finished [1] - 577:14
Firm [2] - 570:12,
 571:2
first [39] - 577:3,
 578:6, 584:6,
 588:24, 589:16,
 593:20, 614:3,
 614:9, 621:8,
 628:20, 629:15,
 629:17, 638:16,
 655:7, 658:4, 662:4,
 663:3, 664:23,
 665:3, 665:6, 669:4,
 673:17, 684:24,
 685:20, 686:24,
 703:21, 705:14,
 709:21, 713:19,
 716:25, 718:3,
 719:20, 719:23,
 722:2, 729:13,
 729:18, 736:3,
```

741:16. 743:23

```
footnote [1] - 712:25
fitness [2] - 642:7,
 643:1
                           footnoted [1] - 627:16
five [12] - 575:17,
                           forecast [4] - 627:4,
 575:22, 588:15,
                            629:19, 629:24,
 602:5, 606:2,
                            630.1
 617:19, 618:4,
                           forecasted [4] - 649:7,
 619:8, 655:6,
                            662:5, 662:7, 686:8
 714:16, 741:4, 743:6
                           forecasts [2] - 627:21,
five-year [7] - 575:17,
                            629:21
 575:22, 617:19,
                           foregoing [1] - 774:11
 619:8, 655:6, 741:4,
                           forget [1] - 700:10
 743:6
                           forgive [1] - 588:8
fix [1] - 724:20
                           form [2] - 659:6, 689:7
flash [3] - 711:17,
                           formally [1] - 582:8
 716:12, 717:16
                           format [1] - 613:5
flash-cut [3] - 711:17,
                           forth [3] - 632:11,
 716:12, 717:16
                            643:22, 719:24
flaw [1] - 678:1
                           forward [3] - 685:8,
flexible [7] - 745:22,
                            685:9, 685:13
 745:23, 746:1,
                           forward-looking [2] -
 746:5, 746:7, 746:9,
                            685:8, 685:13
 747:8
                           forwarded [1] - 610:17
Floor [1] - 569:11
                           four [6] - 599:13,
flow [1] - 650:2
                            602:5, 708:2,
fluctuation [1] - 592:4
                            714:16, 715:2,
focus [3] - 585:6,
                            738:17
 640:5, 721:4
                           four-year [1] - 708:2
focused [2] - 730:17,
                           Fox [1] - 571:23
 731:21
                           FRANK [14] - 570:18,
focusing [1] - 711:15
                            688:14, 688:17,
folks [1] - 730:25
                             692:19, 706:7,
follow [10] - 603:17,
                             706:9, 709:7,
 607:22, 610:19,
                             709:17, 710:1,
 631:2, 634:25,
                             710:5, 710:18,
 651:12, 667:9,
                             715:16, 715:19,
 667:13, 692:24,
                            717:4
 746:18
                           Frank [6] - 688:13,
follow-up [4] - 607:22,
                             703:23, 706:6,
 631:2, 651:12,
                             709:16, 709:25,
 692:24
                             715:15
followed [1] - 678:17
                           frankly [2] - 720:13,
following [8] - 612:6,
                            720:24
 632:6, 674:15,
                           Fredrikson [1] -
 674:20, 708:15,
                            571.14
 713:23, 744:10,
                           freedom [1] - 642:22
 747:25
                           frequency [1] - 699:12
follows [13] - 577:5,
                           frequently [1] - 695:25
 584:8. 614:11.
                           Friedrich [1] - 570:5
 621:10. 638:18.
                           friendly [2] - 607:10,
 656:5, 663:5,
                            613:8
 673:19, 705:15,
                           front [2] - 669:5,
 709:23, 718:4,
                            678:13
 729:20, 742:5
                           frustrated [1] - 600:3
fond [1] - 581:19
                           frustration [1] - 611:6
food [1] - 625:6
```

full [4] - 636:13, 637:24, 678:24, 774:11 fun [1] - 679:3 functionality [1] -609:3 functions [4] - 584:24, 665:12, 665:22, 681:9 fundamental [1] -707:2 funds [1] - 616:18 funnel [1] - 602:12 **FURTHER** [1] - 693:2 furthermore [1] -696:9 future [11] - 609:3, 630:4, 631:20, 631:24, 634:16, 671:24, 685:15, 685:23, 685:24, 731:21, 743:1 future-test-year [1] -631:24

# G

GAAP[2] - 627:22, 656:22 gas [33] - 576:21, 578:8, 578:15, 578:23, 579:6, 580:19, 580:20, 580:25, 581:1, 582:19, 583:5, 583:12, 583:13, 583:16, 639:14, 639:20, 639:22, 639:23, 639:24, 640:3, 640:5, 640:9, 640:14, 640:17, 640:22, 640:24, 641:1, 641:14, 641:16, 641:18, 641:24, 738:18, 747:9 Gas [2] - 580:22 gauge [1] - 600:7 general [19] - 583:6, 589:7, 589:8, 609:12. 616:19. 641:2, 642:3, 665:9, 668:25, 681:6, 723:4, 723:5, 723:7, 723:9, 723:10, 730:23, 735:3,

740:24, 743:20 General [1] - 570:21 generally [7] - 639:23, 641:12, 660:8, 694:20, 695:13, 715:7, 733:16 generate [3] - 646:17, 646:25, 720:19 generating [2] -653:12, 720:14 generation [15] -644:9, 645:10, 646:16, 647:21, 652:18, 652:25, 653:5, 653:10, 680:17, 702:10, 702:11, 720:4, 725:22, 726:4, 727:8 generically [1] - 740:3 Georgia [2] - 577:24, 577:25 GERI [1] - 569:17 given [5] - 619:11, 641:9, 684:2, 715:10, 716:21 goal [4] - 696:10, 696:13, 716:21 **goals** [1] - 727:8 Goode [1] - 570:15 Goodhue [1] - 688:11 GOODHUE [2] -570:15, 688:12 Government [1] -637:13 gradually [1] - 689:22 Grand [5] - 569:12, 570:13, 571:3, 571:15, 572:5 granular [1] - 592:11 graph [1] - 728:25 great [7] - 644:3, 650:13, 688:7, 703:19, 719:19, 740:16, 740:21 greater [2] - 725:4, 725:6 grid [5] - 636:8, 645:15, 647:10,

720:12. 731:4

group [5] - 583:4,

583:12, 583:13,

587:12, 640:18

**Group** [9] - 570:12,

570:21, 571:2,

625:17, 705:6,

705:14, 707:1,

718:3, 727:22

groups [2] - 601:2, 724:7 GS [1] - 678:17 guarantee [2] - 600:3, 650:22 guaranteed [1] -650:24 guess [8] - 590:1, 601:16, 612:22, 657:14, 665:5, 666:16, 683:5, 702:22 guide [1] - 601:23 guideline [1] - 715:12 guys [1] - 680:25

# Н

HALEY [1] - 570:12 half [5] - 609:15, 673:7, 690:19, 691:2, 739:13 hall [1] - 727:24 hand [3] - 584:3, 662:25, 705:11 handle [4] - 585:22, 591:7, 597:14, 601:13 handled [5] - 585:6, 586:8, 609:18, 656:21, 716:13 happy [1] - 742:22 hard [3] - 642:19, 682:3, 683:6 hardware [1] - 658:15 **HE**[1] - 599:2 head [5] - 597:12, 605:14, 632:17, 670:4, 739:4 hear [4] - 624:18, 665:2, 711:23, 738:4 heard [9] - 589:11, 620:22, 625:21, 626:7, 636:24, 639:13, 645:9, 657:24, 672:17 Hearing [10] - 582:18, 582:20, 583:1, 676:21, 677:14, 677:19, 694:3, 703:9, 749:6, 749:15 HEARING [3] - 574:9, 574:11, 574:13 hearing [10] - 575:14, 581:13. 582:23.

623:11, 677:21,

703:12, 749:13, 750:10, 750:15, 774.4 hearings [1] - 738:18 held [1] - 624:15 Helmuth [1] - 627:7 help[11] - 591:18, 595:9, 598:11, 601:23, 602:18, 604:13, 608:25, 612:7, 613:1, 732:4, 744:24 helped [1] - 601:8 helpful [1] - 591:25 helps [1] - 598:14 hereby [2] - 706:4, 774:3 hesitate [1] - 692:16

High [1] - 571:11 high [13] - 582:7, 590:7, 591:14, 591:17, 591:20, 592:12, 595:1, 664:15, 665:6, 678:18, 686:1, 686:11 higher [2] - 661:1, 716:4 highlight [1] - 627:2 highly [1] - 653:7 Hills [1] - 641:22 hills [1] - 619:10 himself [1] - 740:23 historic [1] - 685:5 historical [3] - 680:6, 680:7, 686:10 historical-level [1] -680:7 historically [1] -685:12 history [1] - 672:14 hitting [1] - 724:22 hold [5] - 577:8, 607:15, 614:20, 633:6, 749:23 holding [3] - 639:25, 640:2, 659:24 Holdings [1] - 571:17 holistic [3] - 644:20, 645:16, 646:6 home [3] - 577:14,

651:11, 654:25, 659:2, 670:20, 688:12, 688:14, 692:23, 703:6, 705:5, 706:7, 709:8, 709:17, 715:16, 717:5, 718:7, 718:25, 734:14, 738:22, 739:23 hope [4] - 597:19, 661:10, 679:20, 707:12 hopefully [1] - 656:12 hoping [2] - 607:23, 739:18 host [1] - 712:15 hour [2] - 694:10, 728:10 hours [9] - 586:4, 586:23, 589:12, 589:13, 589:14, 646:3, 647:2, 675:20, 710:24 house [2] - 657:9, 657:12 how-to [1] - 593:11 huge [1] - 690:21 hundred [2] - 611:7, 669:2 Huser [15] - 577:4, 584:7, 614:10, 619:7, 621:9, 638:17, 656:4, 663:4, 673:18, 705:14, 709:22, 718:3, 729:19, 742:4, 750:24 HUSER [236] - 569:17, 575:2, 576:6, 576:12, 576:14, 576:18, 576:22, 577:6, 577:8, 577:15, 578:1, 578:4, 578:24, 582:17, 582:20, 582:23, 583:15, 583:18, 583:20, 584:2, 584:9, 585:16, 585:19, 586:24, 587:4, 587:13, 587:17, 587:24, 588:5, 588:13, 588:19,

589:2, 589:11,

589:19, 589:24,

590:10, 590:23,

591:9. 592:20.

592:24, 594:2, 594:8, 594:14, 594:17, 595:8, 596:2, 596:7, 596:10, 596:13, 596:19, 597:12, 597:20, 598:5, 598:8, 598:25, 599:3, 600:9, 601:13, 601:25, 602:23, 603:2, 603:11, 603:16, 603:24, 604:4, 604:15, 604:25, 605:4, 605:8, 605:11, 605:18, 606:5, 606:9, 606:13. 607:2. 607:12. 607:15. 607:18, 613:15, 613:18, 613:25, 614:5, 614:12, 616:5, 616:8, 616:10, 616:15, 616:20, 617:1, 617:5, 617:23, 618:5, 618:9, 618:15, 618:20, 620:3, 620:25, 621:11, 626:6, 626:11, 626:20, 628:13, 628:18, 629:4, 629:9, 630:2, 630:16, 630:20, 630:25, 631:3, 633:6, 633:11, 634:6, 634:13, 634:18, 638:4, 638:7, 638:10, 638:19, 643:14, 643:17, 643:21, 644:2, 644:7, 644:24, 651:14, 654:15, 654:17, 654:20, 655:12, 655:18, 656:6, 656:10, 657:24, 658:25, 659:8, 662:16, 662:19, 662:22, 662:24, 663:6, 663:10, 664:7, 670:19, 670:21, 671:21, 672:3, 672:10, 673:9, 673:12, 673:20, 675:10, 676:24, 677:2,

594:18, 670:1

721:22

homogenous [1] -

Honor [23] - 575:10,

617:3, 631:1, 639:8,

| 1 |                      | 1                              | T.                      | 1                        |                         |
|---|----------------------|--------------------------------|-------------------------|--------------------------|-------------------------|
|   | 677:4, 677:6,        | idea [5] - 617:23,             | improvement [1] -       | indeed [1] - 699:5       | 602:15, 604:2,          |
|   | 688:11, 688:13,      | 669:8, 691:23,                 | 585:7                   | independent [4] -        | 605:22, 608:12,         |
|   | 692:20, 693:1,       | 692:10, 700:8                  | improvements [2] -      | 590:8, 654:8,            | 619:11, 619:18,         |
|   | 700:22, 701:5,       | ideas [1] - 607:5              | 591:6, 612:7            | 654:11, 737:7            | 619:23, 627:12,         |
|   | 701:13, 702:19,      | identifiable [1] - 684:1       | IN [1] - 569:6          | indicate [4] - 587:4,    | 627:14, 628:22,         |
|   | 702:23, 702:25,      | identified [5] - 590:22,       | in-home [2] - 594:18,   | 594:9, 725:20,           | 628:23, 629:5,          |
|   | 703:2, 703:9,        | 595:9, 604:1, 627:8,           | 670:1                   | 744:23                   | 629:7, 629:12,          |
|   | 703:12, 703:16,      | 677:24                         | in-house [2] - 657:9,   | indicated [10] -         | 629:23, 650:22,         |
|   | 703:19, 705:2,       | identify [4] - 615:5,          | 657:12                  | 585:12, 608:11,          | 657:21, 657:22,         |
|   | 705:8, 705:10,       | 635:9, 669:13,                 | inaccurate [1] - 643:9  | 610:21, 611:24,          | 657:25, 659:13,         |
|   | 705:16, 706:6,       | 710:12                         | inclined [1] - 729:2    | 667:7, 685:19,           | 660:2, 660:11,          |
|   | 709:9, 709:11,       | IEC [1] - 729:14               | include [11] - 623:11,  | 708:8, 708:20,           | 660:14, 662:12,         |
|   | 709:13, 709:16,      | <b>IEEE</b> [5] - 667:9,       | 647:5, 659:25,          | 735:5, 774:6             | 679:24, 680:2,          |
|   | 709:24, 715:15,      | 667:13, 667:18,                | 672:16, 699:6,          | indicates [1] - 707:16   | 682:10, 683:14,         |
|   | 717:19, 717:23,      | 667:21, 667:25                 | 707:4, 707:14,          | indication [2] - 659:6,  | 702:3, 716:24,          |
|   | 718:5, 729:5, 729:8, | <b>II</b> [2] - 630:14, 630:19 | 731:15, 731:18,         | 716:5                    | 733:6, 739:14,          |
|   | 729:12, 731:25,      | <b>III</b> [1] - 569:7         | 735:12, 735:25          | indicator [2] - 700:23,  | 739:25, 741:22,         |
|   | 732:4, 732:15,       | illegal [1] - 727:5            | included [6] - 612:9,   | 701:1                    | 746:14, 746:20          |
|   | 732:21, 732:24,      | illustrated [1] - 690:23       | 619:23, 672:25,         | indirectly [2] - 735:12, | informational [1] -     |
|   | 733:8, 733:11,       | imagine [1] - 664:23           | 697:3, 699:1, 699:12    | 735:25                   | 745:5                   |
|   | 733:18, 733:23,      | immediately [1] -              | including [7] - 624:3,  | individual [7] -         | informed [2] - 671:23,  |
|   | 734:8, 734:11,       | 611:13                         | 639:1, 660:12,          | 598:12, 659:23,          | 707:8                   |
|   | 734:16, 736:7,       | impact [19] - 575:18,          | 660:13, 671:13,         | 659:24, 675:16,          | infrastructure [1] -    |
|   | 737:14, 737:16,      | 575:23, 618:2,                 | 690:14, 745:8           | 675:18, 675:22,          | 696:11                  |
|   | 737:19, 738:6,       | 619:19, 628:22,                | income [4] - 594:4,     | 676:17                   | Ingersoll [1] - 572:3   |
|   | 738:23, 739:1,       | 635:19, 644:8,                 | 594:7, 625:1, 730:22    | Individual [2] - 740:1,  | inherent [3] - 676:13,  |
|   | 739:3, 739:7, 740:8, | 644:13, 645:18,                | inconsistent [1] -      | 749:8                    | 677:25, 694:4           |
|   | 740:11, 741:3,       | 645:21, 646:13,                | 726:16                  | individually [1] -       | initial [4] - 672:18,   |
|   | 741:8, 741:10,       | 647:13, 648:4,                 | increase [28] - 591:10, | 681:3                    | 738:15, 739:11,         |
|   | 741:22, 742:6,       | 654:12, 682:5,                 | 597:13, 617:12,         | individuals [1] -        | 739:15                  |
|   | 742:11, 744:22,      | 699:7, 699:8,                  | 619:10, 619:14,         | 587:25                   | input [3] - 665:17,     |
|   | 745:10, 745:18,      | 716:10, 724:11                 | 620:6, 624:19,          | indulged [1] - 692:24    | 698:25, 702:7           |
|   | 745:25, 746:3,       | impacted [1] - 679:18          | 632:11, 635:5,          | industrial [4] - 625:11, | inquiries [1] - 629:13  |
|   | 746:11, 747:2,       | impacts [6] - 617:16,          | 687:8, 687:16,          | 686:11, 687:8,           | inserts [1] - 593:18    |
|   | 747:5, 747:11,       | 619:18, 644:16,                | 689:5, 711:11,          | 737:25                   | installing [1] - 666:11 |
|   | 749:4, 749:13,       | 646:8, 724:8, 726:5            | 711:17, 712:6,          | industrials [1] -        | instance [8] - 599:12,  |
|   | 749:17, 749:20,      | implement [3] - 592:8,         | 712:8, 712:21,          | 685:25                   | 602:4, 605:23,          |
|   | 749:25, 750:3,       | 609:22, 666:3                  | 721:24, 722:6,          | Industries [5] -         | 632:21, 689:5,          |
|   | 750:15, 750:21,      | implementation [5] -           | 722:7, 723:6,           | 569:11, 579:19,          | 695:1, 702:9, 726:9     |
|   | 751:2, 751:4         | 592:3, 597:4,                  | 724:24, 726:16,         | 579:22, 579:25,          | instead [4] - 665:19,   |
|   | HVAC [1] - 669:24    | 599:21, 601:6,                 | 727:18, 728:13,         | 580:9                    | 681:24, 693:21,         |
|   | hypothetical [3] -   | 609:15                         | 728:18, 728:21,         | industry [7] - 577:23,   | 717:15                  |
|   | 682:8, 694:13,       | implemented [4] -              | 728:22                  | 580:19, 581:1,           | instigate [1] - 598:21  |
|   | 717:10               | 591:13, 647:23,                | increased [4] - 629:2,  | 639:14, 639:22,          | intakes [1] - 732:11    |
|   |                      | 665:25, 667:4                  | 660:5, 693:23, 723:4    | 642:10, 740:18           | intangible [1] - 681:7  |
|   | 1                    | implementing [2] -             | increases [1] - 627:6   | inefficiently [1] -      | integral [1] - 669:21   |
|   |                      | 665:19, 665:22                 | increasing [2] -        | 658:17                   | intend [1] - 741:15     |
|   | I/Phase [1] - 630:19 | importance [1] -               | 721:15, 728:23          | inequitable [1] - 688:5  | intended [1] - 673:3    |
|   | IBEC [1] - 570:15    | 615:21                         | incremental [2] -       | influence [1] - 735:2    | intent [11] - 616:21,   |
|   | ICR [13] - 739:25,   | important [5] -                | 694:24, 694:25          | inform [2] - 602:17,     | 617:14, 704:2,          |
|   | 741:12, 742:14,      | 601:10, 601:21,                | increments [1] -        | 741:1                    | 715:23, 739:20,         |
|   | 742:17, 742:25,      | 611:2, 731:17, 732:6           | 716:24                  | informal [2] - 665:16,   | 741:14, 743:5,          |
|   | 744:24, 745:7,       | imposed [1] - 714:11           | incurred [4] - 685:13,  | 668:19                   | 749:20, 750:5, 750:8    |
|   | 745:9, 746:9,        | improper [1] - 710:14          | 694:23, 700:12,         | information [42] -       | interactions [1] -      |
|   | 746:22, 748:6,       | improperly [1] - 735:1         | 706:22                  | 577:11, 590:25,          | 585:3                   |
|   | 748:11, 749:7        | improved [1] - 600:15          | incurs [2] - 681:9,     | 591:3, 592:14,           | interclass [3] -        |
|   |                      |                                | 700:15                  | 594:9, 594:13,           | 686:17, 687:4,          |
|   |                      | 1                              | ĭ                       | 1                        | i                       |

| 687:23                  | investing [1] - 725:21                 | 641:15, 641:17,                       | 737:22, 738:3,                 | <b>JOHN</b> [1] - 570:7   |
|-------------------------|--|---------------------------------------|--------------------------------|---------------------------|
| interconnection [1] -   | investments [2] -                      | 641:21, 655:21,                       | 741:12, 744:3,                 | Jonathan [1] - 570:10     |
| 732:11                  | 636:10, 668:22                         | 656:24, 660:1,                        | 744:4, 745:8                   | <b>JOSHUA</b> [1] - 571:5 |
| interest [9] - 622:14,  | involve [1] - 636:9                    | 661:11, 665:10,                       | issues [17] - 576:15,          | <b>JR</b> [1] - 569:18    |
| 623:25, 624:5,          | involved [2] - 596:18,                 | 667:17, 668:16,                       | 585:5, 602:8,                  | judgment [1] - 628:4      |
| 624:12, 626:2,          | 727:20                                 | 669:14, 671:2,                        | 602:19, 623:1,                 | jump [1] - 690:18         |
| 652:10, 716:1,          | involvement [2] -                      | 671:9, 671:10,                        | 623:3, 623:4,                  | jurisdiction [3] -        |
| 740:20, 741:1           | 636:7, 636:9                           | 671:16, 673:3,                        | 623:10, 624:9,                 | 602:24, 603:4,            |
| interested [2] -        | involving [2] - 590:7,                 | 676:3, 676:21,                        | 630:17, 630:18,                | 748:13                    |
| 591:23, 727:2           | 590:14                                 | 677:14, 678:22,                       | 631:13, 631:14,                | jurisdictions [1] -       |
| interesting [2] -       | IOWA [2] - 569:1,                      | 679:20, 679:23,                       | 644:11, 660:21,                | 608:1                     |
| 668:13, 720:24          | 569:16                                 | 680:9, 680:11,                        | 731:17, 739:17                 | justice [1] - 687:13      |
| interests [2] - 623:6,  | lowa [40] - 569:10,                    | 680:13, 680:14,                       | <b>IT</b> [4] - 698:3, 698:14, | justified [2] - 720:25,   |
| 624:11                  | 569:12, 570:3,                         | 681:5, 685:2,                         | 698:22, 698:23                 | 723:4                     |
| internal [1] - 586:21   | 570:9, 570:11,                         | 687:15, 687:23,                       | ITC [2] - 571:13,              | 723.4                     |
| internally [2] - 597:6, | 570:14, 570:17,                        | 697:24, 698:10,                       | 571:17                         | 1/                        |
| 603:10                  | 570:23, 571:4,                         | 700:5, 703:9,                         | item [7] - 606:10,             | K                         |
| International [2] -     | 570.23, 571.4,<br>571:7, 571:16,       | 703:14, 714:12,                       | 606:20, 606:21,                |                           |
| 627:15, 629:2           | 571:21, 572:2,                         | 717:2, 717:16,                        | 607:13, 612:24,                | <b>KAM</b> [5] - 683:10,  |
|                         | 571.21, 572.2,<br>572:4, 572:6, 575:2, | 718:23, 719:2,                        | 618:13, 741:7                  | 683:15, 683:20,           |
| Internet [2] - 594:19,  | , , , , , ,                            | 721:6, 722:19,                        | items [5] - 607:9,             | 684:13, 684:15            |
| 608:10                  | 581:17, 581:18,<br>585:11, 587:15,     | 726:16, 727:16,                       | 609:23, 649:1,                 | keep [2] - 617:2,         |
| interpretation [2] -    | 585:11, 587:15,<br>588:11, 588:14,     | 728:1, 728:2,                         | 660:19, 661:22                 | 708:15                    |
| 617:13, 726:21          | 1                                      | 731:20, 732:7,                        | itself [4] - 641:4,            | <b>Kerri</b> [2] - 574:6, |
| interpretations [1] -   | 588:17, 596:4,                         | 732:10, 735:20,                       | 659:4, 661:3, 701:22           | 729:14                    |
| 726:24                  | 603:2, 622:11,                         | 736:12, 740:3,                        | IUB [9] - 589:14,              | KERRI [1] - 729:16        |
| interpreted [1] -       | 634:16, 634:20,                        | 740:15, 740:21,                       |                                | <b>key</b> [7] - 598:20,  |
| 634:11                  | 644:17, 649:4,                         | 742:15, 746:16,                       | 596:18, 629:12,                | 604:9, 604:20,            |
| interrupt [2] - 603:20, | 656:15, 672:5,                         | 747:18                                | 664:15, 664:21,                |                           |
| 603:23                  | 705:2, 727:1, 727:9,                   | IPL's [13] - 619:22,                  | 664:24, 748:9,                 | 610:18, 660:19,           |
| interrupted [1] -       | 735:10, 750:18,                        | 626:25, 635:5,                        | 748:12, 749:6                  | 678:1, 680:20             |
| 603:22                  | 751:4, 774:3, 774:13                   | 635:18, 672:14,                       |                                | keyes [1] - 571:23        |
| interruptible [12] -    | Iowa-American's [1] -                  |                                       | J                              | kilowatt [3] - 646:3,     |
| 603:13, 605:5,          | 581:17                                 | 672:18, 677:11,                       |                                | 647:2, 728:10             |
| 612:10, 724:8,          | IPL [106] - 570:2,                     | 685:10, 691:15,<br>724:15, 735:16,    | JAMES [1] - 570:21             | kilowatt-hour [1] -       |
| 724:11, 724:15,         | 573:3, 574:11,                         | 735:18, 748:19                        | January [4] - 592:23,          | 728:10                    |
| 724:19, 724:21,         | 576:23, 590:7,                         | · ·                                   | 595:23, 713:20,                | kilowatt-hours [2] -      |
| 725:7, 726:9,           | 590:14, 591:13,                        | <b>isolation</b> [2] - 647:15, 693:19 | 744:10                         | 646:3, 647:2              |
| 726:11, 726:13          | 596:5, 596:23,                         |                                       | <b>JAY</b> [2] - 570:10,       | kind [13] - 606:2,        |
| interruption [3] -      | 597:16, 598:9,                         | issue [47] - 575:11,                  | 572:2                          | 627:25, 652:25,           |
| 603:13, 603:18,         | 599:8, 600:14,                         | 599:22, 602:24,                       |                                | 653:10, 658:17,           |
| 612:5                   | 602:9, 603:4,                          | 603:3, 604:14,                        | JEFF [1] - 570:8               | 660:14, 681:2,            |
| interrupts [1] - 604:12 | 603:17, 604:6,                         | 606:3, 610:14,                        | Jefferson [1] - 571:12         | 683:8, 692:15,            |
| INTERSTATE[1] -         | 606:5, 610:10,                         | 611:12, 630:8,                        | JENNIFER [1] - 570:7           | 696:18, 730:19,           |
| 569:7                   | 610:24, 612:1,                         | 630:17, 630:19,                       | <b>Jersey</b> [4] - 579:19,    | 733:23, 741:1             |
| Interstate [8] - 577:2, | 612:6, 612:25,                         | 635:15, 635:16,                       | 579:22, 579:25,                | kinds [1] - 730:21        |
| 583:25, 584:5,          | 617:11, 619:23,                        | 645:22, 645:23,                       | 580:9                          | knowledge [7] -           |
| 656:2, 728:7,           | 622:24, 627:3,                         | 645:25, 652:4,                        | job [1] - 599:25               | 605:3, 653:19,            |
| 728:11, 728:12,         | 627:8, 627:21,                         | 652:11, 652:21,                       | JOHANNSEN [1] -                | 656:23, 671:22,           |
| 742:2                   | 628:23, 629:5,                         | 653:4, 653:15,                        | 729:16                         | 672:2, 678:21,            |
| Intervenors [5] -       | 629:6, 629:23,                         | 653:20, 654:1,                        | Johannsen [9] -                | 727:16                    |
| 571:5, 574:5, 654:7,    | 630:5, 631:17,                         | 654:9, 657:20,                        | 574:6, 729:14,                 | knowledgeable [1] -       |
| 729:18, 732:18          | 631:20, 631:22,                        | 659:17, 664:20,                       | 729:23, 730:11,                | 604:12                    |
| introduce [1] - 581:12  | 631:23, 632:10,                        | 676:18, 679:17,                       | 730:13, 731:25,                | <b>known</b> [1] - 582:9  |
| introduced [1] -        | 635:22, 636:25,                        | 683:4, 685:4, 696:7,                  | 732:21, 734:21,                | Kruger [14] - 573:14,     |
| 581:13                  | 637:6, 637:10,                         | 697:4, 719:3, 724:4,                  | 737:16                         | 621:5, 621:17,            |
| intuitive [2] - 593:5,  | 637:19, 638:1,                         | 732:8, 732:16,                        | Johannsen's [1] -              | 622:4, 622:6, 626:6,      |
| 593:8                   | 639:8, 640:16,                         | 737:5, 737:6,                         | 654:6                          | 631:7, 632:2, 633:7,      |
|                         |  |                                       |                                |                           |
|                         | •                                      | •                                     | •                              | 1                         |

634:25, 636:19, 649:24, 660:5, 660:20 KRUGER [1] - 621:6 kW [4] - 748:1, 748:2, 748:18, 749:1

#### L

labeled [2] - 579:10, 702:7 labor [20] - 680:21, 681:6, 681:12, 681:16, 681:21, 681:24, 682:12, 682:21, 682:24, 683:23, 684:6, 700:22, 700:23, 701:4, 701:7, 701:11, 701:23, 701:25, 702:3, 702:16 Lake [1] - 584:21 landowners [1] -602:5 Large [5] - 570:12, 570:21, 705:6, 705:13, 707:1 large [20] - 598:19, 602:1, 625:11, 636:4, 685:25, 686:3, 686:4, 686:6, 686:11, 686:12, 693:5, 693:7, 693:9, 712:23, 723:3, 723:5, 723:6, 723:9, 723:10, 737:25 larger [2] - 605:25, 627:3 largest [2] - 635:12, 681:5 last [18] - 575:8, 577:14, 589:17, 597:7, 598:13, 612:22, 668:14, 668:15, 672:17, 679:24, 684:2, 684:9, 684:25, 688:5, 702:19, 704:4, 728:23, 733:4 LATHAM[2] - 705:9, 705:12 Latham [7] - 573:21, 705:7, 705:20, 705:22, 706:10,

706:12, 708:17

LAURIE [1] - 571:8 Law [3] - 570:12, 571:2, 572:2 law [7] - 622:14, 623:19, 623:23, 630:4, 656:21, 726:17 lawyer [1] - 736:24 lead [4] - 583:6, 588:18, 661:8, 711:10 leads [1] - 588:15 leapfrog [1] - 666:15 learn [1] - 606:4 learned [2] - 663:21, 673:3 least [8] - 580:25, 604:12, 628:20, 631:19, 640:23, 652:19, 655:2, 693:6 led [1] - 602:2 left [4] - 612:17, 672:16, 701:18, 751:6 LEG [1] - 573:20 legal [1] - 726:23 legislation [12] -616:17, 619:9, 733:2, 733:7, 733:9, 733:12, 733:17, 733:20, 733:22, 734:1, 734:4, 734:9 legislative [5] - 607:4, 629:13, 629:16, 732:22, 733:4 legislators [2] -733:25, 734:6 legislature [3] -617:25, 618:11, 733:4 legislature's [1] -616:21 legitimate [1] - 725:8 LEONARD [1] -571:14 less [15] - 581:9, 581:11, 583:11, 587:3, 606:14, 617:18. 618:14. 641:2. 641:9. 641:13. 641:15. 678:6, 678:10, 695:25, 726:7 letter [2] - 586:7, 599:16

level [6] - 661:2,

662:10, 680:7,

680:13, 748:20 levels [2] - 680:6, 724:16 leverage [2] - 593:11, 594:22 levers [2] - 601:19, 611:17 **LexisNexis** [1] - 599:2 LGS [35] - 678:9, 678:17, 690:24, 691:14, 693:7, 711:11, 711:15, 711:18, 712:9, 712:18, 719:3, 719:18, 720:1, 720:2, 720:3, 721:5, 721:6, 721:9, 721:13, 721:15, 721:17, 721:22, 721:23, 722:1, 722:5, 722:23, 723:12, 723:16, 724:6, 724:7, 725:4 LGS/HLF [1] - 678:18 Liberty [1] - 641:23 lieu [1] - 670:9 life [3] - 635:21, 672:21, 672:25 life-cycle [2] - 672:21, 672:25 light [3] - 622:13, 622:17, 622:20 **Light** [6] - 577:3, 580:22, 583:25, 584:6, 656:3, 742:3 **LIGHT** [1] - 569:7 lights [1] - 720:15 likely [1] - 664:20 liken [1] - 593:7 likeness [1] - 608:22 limited [2] - 671:10, 671:17 limited.. [1] - 671:9 limits [1] - 736:22 Lincoln [1] - 571:23 Line [1] - 642:15 line [29] - 579:18, 604:10. 606:10. 606:20, 606:21, 607:9, 612:24, 615:13, 615:14, 615:16, 615:17, 615:20, 615:21, 618:12, 625:13, 626:21, 629:22, 634:7, 649:1, 649:16, 663:23,

671:14, 674:21, 686:23, 702:9, 712:5, 724:5, 725:3 lines [14] - 595:9, 629:25, 670:9, 670:12, 673:6, 674:16. 674:17. 674:18. 701:20. 701:21, 713:3, 732:2, 734:23 Lines [1] - 642:13 Lipman [1] - 570:10 list [2] - 639:20, 733:14 listed [5] - 579:21, 639:9, 644:12, 671:18, 718:23 live [3] - 592:22, 595:23, 730:25 lived [1] - 598:1 lives [1] - 597:22 living [1] - 598:23 **LLP** [3] - 570:5, 570:18, 571:23 load [9] - 675:18, 678:18, 686:1, 686:12, 689:2, 689:4, 710:23, 720:16 lobbied [1] - 733:12 lobbying [3] - 733:1, 733:6, 733:14 local [1] - 572:3 located [3] - 600:6, 746:23 location [4] - 585:8, 588:1, 588:6, 665:10 locational [2] - 649:7, 649:8 locations [2] - 672:7, 672:8 locked [1] - 700:11 LONG [24] - 570:7, 576:17, 576:19, 578:25, 579:2, 579:5, 579:7, 579:13, 579:17, 581:12, 581:14, 582:15, 582:19, 638:12, 638:21, 638:23, 639:6, 654:16, 662:20, 663:11, 663:13, 664:5, 672:12, 673:8 look [33] - 575:17, 575:22, 579:18, 583:7, 598:15,

601:4, 601:17, 601:21, 606:18, 611:16, 613:6, 613:7, 668:13, 678:16, 679:3, 679:11, 680:8, 680:13, 683:12, 690:25, 691:14, 693:18, 720:21, 721:3, 721:10, 721:12, 721:16, 721:20, 722:4, 722:11, 722:18, 723:25 lookback [1] - 636:10 looked [8] - 612:15, 631:11, 645:23, 650:14, 676:12, 676:13, 683:18, 683:20 looking [18] - 583:8, 597:23, 601:9, 611:18, 641:14, 643:3, 647:18, 648:16, 678:12, 678:23, 679:5, 685:8, 685:10, 685:13, 712:13, 721:1, 728:8, 748:22 lookout [1] - 655:6 looks [1] - 633:13 Loon [5] - 573:10, 703:22, 705:4, 705:17, 709:11 LOON [5] - 570:12, 705:5, 705:19, 706:4, 709:12 loss [2] - 637:14, 649:16 losses [1] - 649:16 low [10] - 580:16, 581:2, 581:4, 581:7, 582:2, 592:2, 594:3, 596:16, 625:1, 730:22 low-income [2] -625:1, 730:22 lower [6] - 582:3, 595:24, 603:25, 610:24, 618:8, 637:23 lowering [1] - 635:20 Lozier [5] - 616:8, 631:8, 635:2, 697:10, 751:2 LOZIER [44] - 569:18, 616:9, 622:6,

691:25, 692:8

667:18, 668:6

metrics [3] - 667:8,

mic [2] - 578:2, 663:7

MICHAEL [1] - 571:5

memories [1] - 581:19

memory [3] - 667:11,

mention [2] - 639:14,

733:5, 747:17

695:21

| 622:10, 622:21,                               | 604:9, 604:20,         | 696:12, 698:5,        | 664:19, 664:25,  | mentioned [17] -       |
|---|------------------------|-----------------------|--|------------------------|
| 623:5, 623:17,                                | 610:18                 | 702:21, 706:17,       | 665:8, 665:18,   | 581:2, 583:4, 620:5,   |
| 623:24, 624:14,                               | managers [3] -         | 711:12, 711:14,       | 665:21, 666:2,   | 634:2, 641:1, 641:9,   |
| 624:18, 624:22,                               | 588:14, 588:16,        | 713:2, 745:4, 745:6,  | 666:10, 666:17,  | 646:15, 659:20,        |
| 624:25, 625:4,                                | 680:20                 | 746:19                | 666:22, 667:6,   | 661:22, 665:18,        |
| 625:10, 625:16,                               | MANDELBAUM[1] -        | meaning [1] - 633:19  | 667:20, 667:24,  | 669:20, 684:11,        |
| 625:23, 626:1,                                | 571:5                  | means [2] - 593:24,   | 668:5, 668:10,   | 697:16, 699:4,         |
| 626:4, 636:19,                                | manner [2] - 604:14,   | 716:3                 | 668:14, 668:23,  | 713:10, 715:3, 717:8   |
| 636:24, 637:3,                                | 640:18                 | meant [5] - 596:12,   | 669:3, 669:9,  | mentioning [1] - 657:3 |
| 638:3, 669:11,                                | Mansion [1] - 570:10   | 601:4, 620:22,        | 669:11, 669:16,  | merge [1] - 575:14     |
| 669:16, 670:2,                                | manual [5] - 627:1,    | 634:9, 696:21         | 670:2, 670:6,  | merits [1] - 653:25    |
| 670:6, 670:13,                                | 627:3, 628:3, 628:7,   | measure [1] - 675:15  | 670:13, 670:17,  | message [2] - 612:17,  |
| 670:17, 719:7,                                | 698:25                 | measurement [1] -     | 694:19, 695:8,   | 612:18                 |
| 719:21, 725:17,                               | March [1] - 724:15     | 589:6                 | 695:16, 695:20,  | Met [1] - 569:14       |
| 726:14, 726:22,                               | Marcos [2] - 573:16,   | mechanism [3] -       | 696:2, 696:15,   | met [3] - 623:2,       |
| 727:10, 728:5,                                | 638:13                 | 632:19, 632:22,       | 696:21, 697:1,   | 624:10, 672:24         |
| 728:15, 728:20,                               | MARCOS [1] - 638:14    | 637:8                 | 697:13, 697:23,  | meter [21] - 592:3,    |
| 729:3, 730:13,                                | MARCUS [1] - 570:10    | media [1] - 593:16    | 698:1, 698:7,  | 592:6, 600:1, 611:4,   |
| 731:6, 731:11,                                | Marcus [1] - 577:11    | median [1] - 594:6    | 698:19, 698:22,  | 611:12, 645:10,        |
| 731:23, 750:20,                               | margin [2] - 650:16    | meet [1] - 603:25     | 699:3, 699:16,   | 670:1, 694:21,         |
| 751:3   | marginal [2] - 649:7,  | meeting [3] - 606:1,  | 699:20, 699:23,  | 695:4, 695:21,         |
| lunch [2] - 703:17,                           | 649:8                  | 625:21, 727:23        | 700:3, 700:17,   | 695:23, 695:24,        |
| 705:3   | market [3] - 721:21,   | meetings [4] - 602:2, | 700:21, 713:9,   | 696:1, 696:23,         |
| Luther [9] - 625:18,                          | 730:15, 737:6          | 624:15, 662:7,        | 714:15, 714:25,  | 697:17, 698:16,        |
| 719:10, 720:3,                                | marketing [1] - 595:12 | 727:23                | 715:14, 717:6,   | 699:14, 720:4,         |
| 720:7, 720:11,                                | markets [1] - 730:17   | meets [1] - 747:24    | 717:18, 719:7,   | 720:14, 726:4, 727:8   |
| 720:18, 721:8,                                | Martin [2] - 719:1,    | MEMBER [140] -        | 719:21, 725:17,  | metering [29] - 644:9, |
| 725:24, 726:2                                 | 727:13                 | 583:3, 583:14,        | 726:14, 726:22,  | 644:14, 644:15,        |
|   | Martin-Schramm [2] -   | 616:9, 620:4,         | 727:10, 728:5,   | 644:17, 644:23,        |
| M   | 719:1, 727:13          | 620:10, 620:16,       | 728:15, 728:20,  | 645:4, 645:8,          |
|   | masked [1] - 619:13    | 620:20, 622:6,        | 729:3, 730:13,   | 645:15, 645:19,        |
| <b>M-o-r-i-n</b> [1] - 577:21                 | massive[1] - 694:9     | 622:10, 622:21,       | 731:6, 731:11,   | 645:22, 646:1,         |
| Madison [5] - 587:16,                         | match [1] - 667:25     | 623:5, 623:17,        | 731:23, 742:12,  | 646:4, 646:7, 646:9,   |
| 588:3, 588:4, 588:7,                          | material [1] - 575:7   | 623:24, 624:14,       | 742:24, 743:5,   | 646:10, 646:14,        |
| 588:18  | math [3] - 693:13,     | 624:18, 624:22,       | 743:10, 743:15,  | 646:16, 647:5,         |
| MAGNER [1] - 572:5                            | 728:12, 728:14         | 624:25, 625:4,        | 743:19, 744:7,   | 647:20, 648:12,        |
| mail [3] - 586:3,                             | matter [5] - 602:20,   | 625:10, 625:16,       | 744:11, 744:16,  | 648:13, 648:16,        |
| 589:10, 598:12                                | 606:8, 620:11,         | 625:23, 626:1,        | 744:19, 750:17,  | 648:23, 652:23,        |
| mailbox [1] - 589:8                           | 687:4, 774:5           | 626:4, 632:1, 632:8,  | 750:20, 751:1, 751:3   | 652:24, 654:13,        |
| mailing [1] - 598:13                          | MATTHEW[1] -           | 632:23, 633:5,        | Member [23] - 569:18,  | 696:10, 697:12         |
| mailings [1] - 593:19                         | 571:19                 | 636:19, 636:24,       | 569:18, 575:12,  | meters [14] - 597:5,   |
|   | McConnell [5] -        | 637:3, 638:3,         | 575:15, 616:8,   | 599:4, 600:12,         |
| <b>main</b> [3] - 586:13,<br>591:4, 667:3     | 589:24, 617:1,         | 639:10, 639:13,       | 619:7, 620:3, 631:8,   | 600:20, 647:8,         |
| maintenance [1] -                             | 617:8, 738:6, 750:3    | 640:20, 641:6,        | 634:6, 635:2,  | 666:6, 666:13,         |
| 671:11  | McCormick[1] -         | 642:2, 643:13,        | 643:21, 651:12,  | 666:19, 666:20,        |
| major [3] - 609:16,                           | 571:20                 | 644:25, 645:3,        | 652:17, 656:10,<br>664:7, 669:12,  | 695:9, 696:6,          |
| •   | mcDERMOTT[1] -         | 645:21, 646:15,       | The state of the s | 696:17, 698:23,        |
| 667:14, 667:15                                | 571:19                 | 646:21, 646:23,       | 697:10, 699:22,  | 699:6                  |
| <b>majority</b> [6] - 585:10, 586:10, 586:21, | McElwain [1] - 572:2   | 647:7, 647:17,        | 742:11, 750:6,<br>750:16, 750:25,  | methodology [8] -      |
|   | mean [24] - 582:11,    | 648:9, 649:3,         | 750.16, 750.25,<br>751:2   | 675:14, 688:19,        |
| 590:12, 597:5,<br>664:14                      | 595:9, 611:17,         | 649:11, 649:19,       |  | 688:21, 688:25,        |
| 664:14  | 613:7 627:19           | 651:10, 656:11,       | Members [1] - 741:19   | 689:8, 691:17,         |

656:20, 656:24,

657:7, 657:13,

657:19, 660:4,

661:7, 661:11,

662:14, 664:8,

613:7, 627:19,

642:21, 647:9,

653:8, 676:13,

678:6, 690:25,

691:23, 692:13,

management [1] -

587:11, 587:25,

588:4, 588:16,

manager [8] - 585:10,

588:14

| Michael [1] - 570:5                |
|------------------------------------|
| MICHEK [1] - 656:1                 |
| Michek [18] - 573:6,               |
|                                    |
| 573:9, 575:17,                     |
| 575:24, 576:5,                     |
| 576:6, 613:20,                     |
| 635:19, 654:21,                    |
| 654:25, 655:21,                    |
| 656:6, 656:11,                     |
| 659:3, 660:4, 704:4,               |
| 739:21, 741:9                      |
| Michigan [1] - 571:18              |
| microphone [1] -                   |
| 643:25                             |
| MidAmerican [11] -                 |
| 572:5, 728:8,                      |
| 728:11, 728:13,                    |
|                                    |
| 746:13, 746:20,                    |
| 746:25, 747:3,<br>747:23, 748:17,  |
|                                    |
| 749:7                              |
| MidAmerican's [2] -                |
| 747:16, 747:19                     |
| Midland [1] - 709:21               |
| Midwest [1] - 571:13               |
| might [10] - 660:6,                |
| 661:8, 695:10,                     |
| 700:1, 708:5,                      |
| 711:24, 719:14,                    |
| 731:5, 731:13,                     |
| 732:10                             |
|                                    |
| million [22] - 618:3,              |
| 619:1, 635:5,                      |
| 636:14, 687:7,                     |
| 691:15, 691:16,                    |
| 693:12, 693:21,                    |
| 693:24, 708:21,<br>708:22, 708:23, |
| 708:22, 708:23,                    |
| 708:25, 711:8,                     |
| 711:11, 712:9,                     |
| 712:19, 712:20,                    |
| 712:19, 712:20,<br>712:21, 712:22, |
| 723:6                              |
| Milwaukee [1] - 570:6              |
| mind [3] - 575:15,                 |
| 643:23, 708:16                     |
| mine [1] - 685:1                   |
|                                    |
| minimal [2] - 698:3,               |
| 699:6                              |
| minor [5] - 710:8,                 |
| 712:7, 712:9,                      |
| 712:12, 712:17                     |
| minute [2] - 643:22,               |
| 695:12                             |
| minutes [1] - 751:7                |
|                                    |
| miscommunication                   |
|                                    |

misinformation [2] -600:11, 600:25 MISO [3] - 649:10, 700:15. 714:12 **Missouri** [1] - 571:12 misspoke [1] - 697:22 mitigating [1] - 716:10 mitigation [1] - 650:4 mix [2] - 639:24, 640:2 mixed [1] - 724:25 mobile [1] - 594:22 mocked [1] - 613:4 mocked-up [1] - 613:4 model [4] - 583:8, 640:21, 641:3, 641:8 moderate [3] - 594:4, 715:8, 715:11 modernization [1] -636:8 modification [2] -646:1, 748:12 Module [20] - 627:11, 627:18, 628:6, 628:8, 628:17, 628:19, 628:21, 628:25, 629:10, 629:19, 631:17, 631:19, 632:9, 658:11, 658:20, 658:23, 659:1, 659:18. 659:25. 661:12 Moines [12] - 569:12, 570:9, 570:14, 570:17, 570:23, 571:4, 571:7, 571:16, 571:21, 572:4, 572:6, 774:13 moment [3] - 691:24, 697:20, 738:21 money [5] - 637:7, 637:12, 693:6, 693:7, 693:9 monitored [1] - 601:7 MONOPOLI [1] -571.17 monopoly [1] - 730:15 month [5] - 592:15, 595:13, 597:7, 697:10, 697:18 monthly [2] - 587:2, 606:1 months [2] - 748:1, 748:2 moratorium [1] -597:13

MORIN [1] - 577:1 Morin [15] - 573:4, 576:9, 576:10, 576:20, 576:23, 577:19, 577:21, 578:1, 578:6, 578:22, 579:3, 579:8, 581:15, 583:3, 641:10 Morin's [2] - 579:14, 639:11 morning [12] - 579:3, 579:4, 614:5, 614:6, 639:11, 644:3, 655:3, 655:5, 660:20, 662:22, 662:23, 663:22 most [7] - 596:16, 601:8, 604:8, 672:4, 680:3, 714:8 Most [1] - 589:9 mostly [1] - 584:22 motion [2] - 750:20, 750:23 move [16] - 582:18, 615:19, 658:20, 666:18, 703:7, 703:22. 714:9. 716:7, 716:25, 725:9, 725:15, 739:20, 741:14, 750:6, 750:9, 750:17 moved [6] - 575:4, 575:7, 713:21, 713:24, 714:2, 750:21 movement [5] -689:20, 700:13, 715:12, 715:21, 716:12 moves [1] - 698:16 moving [4] - 611:6, 650:18, 703:9, 716:11 MR [119] - 575:10. 576:10, 576:13, 576:17, 576:19, 576:23, 577:18, 578:5, 578:22, 578:25, 579:2, 579:5, 579:7, 579:13, 579:17, 581:12, 581:14, 582:15, 582:19, 583:19, 583:25, 584:11, 585:12, 607:19, 607:21,

651:15, 651:17, 654:14, 654:16, 654:25, 655:16, 655:20, 657:21, 659:2, 659:12, 662:15, 662:20, 662:23, 663:11, 663:13, 664:5, 670:20, 670:22, 670:24, 671:4, 671:6, 671:20, 672:12. 673:8. 673:14. 673:23. 675:8, 675:12, 676:21, 677:1, 677:3, 677:5, 677:8, 677:9, 686:19, 686:21, 688:10, 688:12, 688:14, 688:17, 692:19, 692:23, 693:3, 694:17, 703:1, 703:6, 706:7, 706:9, 709:7, 709:10, 709:17, 710:1, 710:5, 710:18, 710:21, 713:7, 715:16, 715:19, 717:4, 718:23, 729:14, 729:22, 730:9, 734:13, 734:14, 734:20, 736:9, 736:11, 737:13, 737:15, 737:22, 738:21, 738:25, 739:23, 740:10, 740:13, 741:5, 741:9, 747:13, 749:3, 749:12 MS [26] - 577:13, 614:4, 614:15, 616:3, 618:22, 618:24, 620:2, 621:3, 621:5, 621:14, 622:4, 634:24, 636:18, 638:6, 654:24, 705:5, 705:19, 706:4, 709:12, 717:24, 718:7,

613:13, 613:21,

631:6, 631:25,

638:12, 638:21,

638:23, 639:6,

639:8, 651:11,

617:3, 631:1, 631:4,

718:9, 718:21,
718:25, 729:6, 739:2
muddy [1] - 692:15
multiple [1] - 662:9
municipalization [1] 727:14
Munoz [7] - 573:16,
638:13, 638:24,
639:6, 639:10,
643:17, 651:18
MUNOZ [1] - 638:14
music [2] - 644:2,
644:6
must [3] - 623:25,
630:13, 636:21

#### Ν

N.W [1] - 570:19 name [16] - 577:19, 577:21, 584:13, 597:24, 597:25, 614:16, 614:18, 621:15, 621:17, 673:24, 705:20, 740:13, 740:15, 740:16, 740:22, 740:23 **narrow** [1] - 640:5 narrowing [1] - 640:5 necessarily [8] -639:17, 640:8, 641:6, 647:12, 700:12, 707:25, 732:12, 745:20 necessary [5] - 692:7, 714:5, 714:13, 714:19, 714:24 need [22] - 586:17, 590:4, 593:25, 595:6, 609:1, 613:20, 644:21, 645:18, 646:8, 654:11, 658:21, 695:3, 703:7, 715:10, 719:5, 719:23, 723:25, 738:4, 741:16, 742:18, 745:21 needed [3] - 601:3, 658:14, 715:8 needs [9] - 628:14, 644:14, 644:15, 645:7, 645:15, 645:23, 647:13, 648:5, 667:25

| <b>NEIL</b> [1] - 656:1           | 721:5, 721:7, 721:8,                  | 683:24, 699:11,         | 702:21, 743:12                         | 648:4, 649:23,                |
|-----------------------------------|---------------------------------------|-------------------------|--|-------------------------------|
| Neil [2] - 573:6, 573:9           | 721:3, 721:7, 721:0,                  | 699:17, 699:25,         | OCA's [2] - 635:15,                    | 650:5, 651:2,                 |
| net [33] - 637:13,                | 722:5, 722:14,                        | 714:16, 728:1,          | 635:18                                 | 651:11, 652:16,               |
| 644:14, 644:15,                   | 722:22, 723:18,                       | 744:17, 747:6           | occur [6] - 599:19,                    | 655:2, 655:4, 657:1,          |
| 644:16, 644:23,                   | 723:22, 724:22,                       | numbered [2] -          | 628:15, 628:16,                        | 663:21, 669:19,               |
| 645:4, 645:8,                     | 725:10                                | 579:18, 678:13          | 706:21, 707:7,                         | 670:20, 673:6,                |
| 645:14, 645:19,                   | non-utility [3] - 607:1,              | numbering [1] -         | 713:13                                 | 676:25, 677:20,               |
| 645:22, 646:1,                    | 735:13, 736:1                         | 581:23                  | occurred [3] - 609:17,                 | 677:22, 678:6,                |
| 646:4, 646:6, 646:9,              | non-wires [1] - 731:3                 | numbers [16] - 581:1,   | 679:17, 708:13                         | 678:7, 680:10,                |
| 646:14, 646:16,                   | none [6] - 582:23,                    | 581:3, 581:4, 581:7,    | occurrence [1] -                       | 683:23, 684:1,                |
| 646:20, 647:5,                    | 672:24, 703:12,                       | 581:11, 582:7,          | 591:10                                 | 688:2, 689:4, 690:3,          |
| 647:8, 647:20,                    | 706:3, 749:12,                        | 589:8, 592:2,           | occurring [1] - 598:14                 | 692:24, 694:9,                |
| 648:12, 648:13,                   | 750:15                                | 626:19, 627:23,         | October [8] - 569:13,                  | 697:20, 701:18,               |
| 648:16, 648:23,                   | nonissue [1] - 611:11                 | 629:22, 677:22,         | 738:11, 738:12,                        | 706:14, 706:18,               |
| 650:15, 650:16,                   | nonregulated [4] -                    | 678:22, 679:8,          | 738:13, 738:14,                        | 706:25, 707:8,                |
| 652:23, 652:24,                   | 735:2, 736:17,                        | 693:19, 728:9           | 744:10, 774:14                         | 707:17, 708:9,                |
| 654:13, 720:16                    | 736:19, 737:10                        | numerically [1] -       | <b>OF</b> [2] - 569:1, 569:1           | 710:8, 714:3, 715:5,          |
| never [5] - 640:6,                | nonstandard [4] -                     | 729:2                   | of-day [2] - 725:11,                   | 716:6, 717:16,                |
| 647:9, 647:11,                    | 694:20, 695:9,                        | numerous [2] -          | 725:13                                 | 719:14, 720:8,                |
| 726:4, 728:4                      | 695:20, 697:17                        | 600:10, 629:8           | of-service[1] - 706:13                 | 731:17, 734:14,               |
| <b>new</b> [15] <b>-</b> 592:9,   | normal [1] - 603:23                   | Nyemaster [1] -         | off-peak [1] - 722:21                  | 735:6, 738:21,                |
| 593:23, 605:17,                   | normal-type [1] -                     | 570:15                  | offer [6] - 611:21,                    | 740:6, 746:11,                |
| 609:14, 609:16,                   | 603:23                                |                         | 745:9, 745:13,                         | 748:23                        |
| 613:4, 617:19,                    | noted [2] - 590:20,                   | 0                       | 745:23, 746:22,                        | One [1] - 660:19              |
| 619:8, 630:4,                     | 693:5                                 |                         | 746:25                                 | one-and-a [1] - 673:6         |
| 658:14, 662:11,                   | <b>notes</b> [4] - 601:5,             | o'clock [1] - 704:1     | offering [1] - 745:21                  | one-hour-and-10-              |
| 714:10, 737:24,                   | 607:22, 774:9,                        | objection [5] - 582:21, | <b>office</b> [1] - 588:3              | minute [1] - 703:25           |
| 737:25                            | 774:12                                | 614:2, 703:10,          | Office [12] - 570:7,                   | one-third [1] - 593:21        |
| next [16] - 575:9,                | <b>nothing</b> [9] - 583:19,          | 739:4, 749:11           | 614:8, 614:19,                         | ones [2] - 632:10,            |
| 583:22, 595:13,                   | 626:5, 638:6,                         | objections [3] -        | 621:7, 621:18,                         | 632:11                        |
| 615:15, 621:4,                    | 662:15, 670:18,                       | 732:19, 738:12,         | 624:6, 624:8,                          | online [3] - 593:14,          |
| 623:17, 628:24,                   | 673:8, 703:1, 704:6,                  | 738:13                  | 638:15, 663:2,                         | 594:10, 595:16                |
| 638:10, 638:12,<br>653:8, 662:20, | 729:8                                 | objective [1] - 725:8   | 673:16, 674:2, 674:3                   | <b>open</b> [7] - 586:15,     |
| 673:13, 678:17,                   | notice [5] - 619:21,                  | obtain [3] - 628:23,    | Office's [1] - 685:1                   | 605:6, 610:14,                |
| 717:1, 724:10, 725:1              | 722:20, 723:3,                        | 629:5, 661:12           | Offices [1] - 572:2                    | 714:3, 738:2, 740:4,<br>740:7 |
| NICK [1] - 569:18                 | 724:5, 725:2                          | obtained [1] - 641:8    | official [1] - 774:4                   | opening [1] - 602:2           |
| Nielsen's [1] - 645:12            | <b>notify</b> [2] - 603:17,<br>612:20 | obviously [1] - 680:4   | offsetting [1] - 700:1                 | operate [3] - 588:1,          |
| night [3] - 577:14,               | Novi [1] - 571:18                     | OCA [39] - 573:11,      | often [1] - 714:17                     | 593:3, 660:22                 |
| 684:2, 684:9                      | nuance [1] - 601:23                   | 574:9, 582:18,          | oftentimes [5] - 592:4,                | operating [2] - 637:14,       |
| NO [1] - 569:6                    | nuances [1] - 747:22                  | 582:20, 583:1,          | 600:2, 602:10,                         | 639:25                        |
| <b>No.1</b> [1] - 701:9           | number [43] - 580:13,                 | 614:4, 614:20,          | 611:6, 728:1                           | operation [1] - 671:12        |
| non [21] - 588:20,                | 580:16, 582:10,                       | 621:5, 622:23,          | old [1] - 660:3                        | operations [1] -              |
| 607:1, 674:10,                    | 582:14, 591:11,                       | 622:24, 623:3,          | omitted [1] - 663:24                   | 641:19                        |
| 675:21, 675:22,                   | 596:20, 602:1,                        | 626:24, 627:5,          | <b>once</b> [3] - 599:21, 601:7, 703:6 | <b>opinion</b> [10] - 616:20, |
| 721:5, 721:7, 721:8,              | 605:5, 609:6, 625:4,                  | 627:6, 627:8,           | one [73] - 575:11,                     | 628:13, 633:12,               |
| 721:11, 721:20,                   | 628:2, 635:25,                        | 628:21, 629:11,         | 577:8, 580:12,                         | 678:23, 687:21,               |
| 722:5, 722:14,                    | 636:1, 636:2, 636:3,                  | 631:11, 631:16,         | 580:19, 582:8,                         | 689:23, 693:6,                |
| 722:22, 723:18,                   | 636:11, 637:22,                       | 635:13, 636:14,         | 587:22, 587:23,                        | 696:9, 721:23,                |
| 723:22, 724:22,                   | 642:15, 642:18,                       | 637:19, 637:20,         | 588:2, 588:3,                          | 732:25                        |
| 725:10, 725:12,                   | 653:6, 659:2, 659:4,                  | 638:12, 642:12,         | 588:17, 589:17,                        | opportunities [1] -           |
| 731:3, 735:13, 736:1              | 659:7, 659:22,                        | 649:21, 650:5,          | 593:21, 597:16,                        | 593:10                        |
| non-coincident [1] -              | 661:8, 661:14,                        | 659:9, 660:5,           | 599:12, 602:4,                         | opportunity [6] -             |
| 675:21                            | 661:21, 662:1,                        | 662:20, 673:14,         | 607:15, 609:22,                        | 576:4, 653:14,                |
| non-peak [1] - 588:20             | 663:24, 675:19,                       | 675:8, 677:12,          | 622:15, 626:24,                        | 666:12, 669:4,                |
| non-time [1] - 725:12             | 681:25, 682:4,                        | 683:13, 693:22,         | 628:3, 631:1,                          | 728:3, 740:3                  |
| non-time-of-day [12] -            | 682:14, 682:16,                       | 694:20, 700:19,         | 635:11, 644:10,                        | opposed [8] - 638:1,          |
|                                   |                                       |                         |  |                               |
|                                   |                                       |                         |  |                               |

| 684:19, 689:14,                 | Р   | 682:3                            | 632:18                                     | 591:14, 594:3,                              |
|---------------------------------|---|----------------------------------|--|---|
| 694:20, 716:12,                 | -   | <b>part</b> [40] - 575:13,       | path [1] - 609:25                          | 595:1, 596:3, 596:7,                        |
| 726:13, 733:21,                 |   | 601:8, 609:5,                    | patterns [1] - 588:22                      | 596:8, 596:14,                              |
| 733:24                          | P.A <sub>[1]</sub> - 571:14                 | 619:19, 623:5,                   | Pause [3] - 607:17,                        | 617:24, 618:2,                              |
| opposition [1] -                | <b>P.C</b> [3] - 570:15,                    | 623:6, 631:23,                   | 738:24, 749:24                             | 679:7, 684:19,                              |
| 700:16                          | 570:21, 571:20                              | 644:14, 644:22,                  | <b>pay</b> [15] - 591:3,                   | 690:19, 691:1,                              |
| <b>opt</b> [4] - 597:9,         | <b>p.m</b> [4] - 589:17,                    | 645:6, 645:7,                    | 593:12, 597:22,                            | 691:2, 712:23                               |
| 597:10, 600:12,                 | 704:7, 705:1, 751:10                        | 645:16, 646:5,                   | 625:6, 632:14,                             | percentages [1] -                           |
| 601:12                          | Page [3] - 626:18,                          | 646:8, 647:14,                   | 632:24, 633:1,                             | 678:4                                       |
| opt-out [4] - 597:9,            | 626:22, 674:21                              | 648:6, 649:24,                   | 644:20, 646:17,                            | <b>perform</b> [1] - 673:3                  |
| 597:10, 600:12,                 | page [62] - 581:22,                         | 650:21, 652:19,                  | 646:19, 646:24,                            | performed [2] -                             |
| 601:12                          | 581:24, 589:25,                             | 652:23, 658:12,                  | 647:2, 666:19,                             | 672:20, 672:23                              |
| option [10] - 721:5,            | 590:1, 590:2, 615:8,                        | 662:2, 662:4,                    | 666:24, 706:23                             | perhaps [17] - 580:14,                      |
| 721:7, 721:9,                   | 615:13, 615:14,                             | 665:15, 685:3,                   | paying [10] - 599:23,                      | 580:15, 580:17,                             |
| 721:11, 722:5,                  | 615:16, 615:20,                             | 688:3, 702:20,                   | 633:20, 633:22,                            | 583:7, 583:11,                              |
| 725:10, 725:11,                 | 617:4, 619:1,                               | 707:21, 720:3,                   | 634:3, 634:8, 637:7,                       | 586:18, 591:6,                              |
| 725:13                          | 619:25, 626:16,                             | 724:3, 727:21,                   | 637:11, 637:15,                            | 591:18, 597:8,                              |
| options [7] - 599:24,           | 626:18, 626:20,                             | 731:15, 731:16,                  | 646:15, 697:5                              | 597:21, 603:9,                              |
| 610:5, 611:18,                  | 627:2, 627:12,                              | 732:8, 732:18,                   | payment [6] - 593:14,                      | 611:9, 683:9, 690:5,                        |
| 697:3, 722:22,                  | 627:13, 627:16,                             | 735:16, 735:18,                  | 598:3, 599:14,                             | 690:7, 691:25, 738:5                        |
| 725:7, 732:13                   | 630:3, 635:25,                              | 742:22, 745:2, 745:5             | 599:23, 610:2, 610:3                       | <b>period</b> [8] - 604:6,                  |
| order [9] - 628:14,             | 636:2, 663:23,                              | partial [1] - 674:11             | peak [6] - 588:20,                         | 623:2, 708:2,                               |
| 660:24, 687:22,                 | 669:1, 671:5, 671:8,                        | partially [1] - 632:9            | 609:13, 675:21,                            | 713:16, 713:18,                             |
| 724:15, 739:8,                  | 674:16, 674:17,                             | participate [3] - 726:7,         | 675:23, 722:21                             | 715:1, 715:13,                              |
| 739:9, 739:11,                  | 674:18, 674:21,                             | 726:12, 737:4                    | peaking [1] - 694:10                       | 716:23                                      |
| 739:13, 742:20                  | 674:22, 683:13,                             | participating [1] -              | peer [2] - 583:12,                         | periods [1] - 715:2                         |
| organization [1] -              | 686:17, 686:19,                             | 737:3                            | 583:13                                     | person [4] - 589:16,                        |
| 659:15                          | 690:7, 690:14,                              | participation [3] -              | penalties [1] - 605:10                     | 597:24, 598:23,                             |
| otherwise [3] -                 | 690:16, 690:18,                             | 653:6, 725:4, 725:6              | penalty [1] - 605:16                       | 605:1                                       |
| 730:17, 730:24,                 | 691:8, 691:9, 710:8,                        | particular [10] - 591:3,         | people [11] - 587:10,                      | personally [1] -                            |
| 731:5                           | 710:12, 711:1,                              | 593:25, 602:24,                  | 598:17, 602:14,                            | 640:14                                      |
| outage [2] - 588:23             | 712:1, 715:21,                              | 635:8, 683:4,                    | 607:1, 624:19,                             | <b>personnel</b> [1] - 600:6                |
| outlined [2] - 657:15,          | 719:20, 719:23,                             | 712:12, 722:19,                  | 625:1, 625:4,                              | persons [1] - 597:15                        |
| 690:17                          | 722:2, 722:25,                              | 735:6, 736:25, 737:1             | 725:10, 726:12,                            | perspective [1] -                           |
| outlines [1] - 746:13           | 723:1, 724:2, 725:1,                        | particularly [2] -               | 728:1, 729:2                               | 720:14                                      |
| outs [1] - 591:22               | 725:2, 730:14,                              | 627:1, 722:17                    | <b>per</b> [7] - 667:18,                   | <b>phase</b> [17] - 691:19,                 |
| outside [5] - 587:6,            | 732:1, 734:23,                              | parties [25] - 616:5,            | 673:7, 697:10,                             | 692:1, 692:7,                               |
| 602:11, 602:19,                 | 739:24, 749:8, 750:1                        | 622:23, 622:24,                  | 697:18, 715:3,                             | 692:10, 693:18,                             |
| 647:23, 657:4                   | Pages [2] - 569:22,                         | 623:3, 624:2,                    | 715:4, 728:10                              | 708:5, 711:24,                              |
| overall [12] - 618:15,          | 751:8                                       | 652:10, 653:6,                   | percent [37] - 579:22,                     | 713:11, 713:16,                             |
| 619:19, 620:7,                  | pages [4] - 626:23,                         | 654:5, 658:7, 661:9,             | 580:1, 580:2, 580:4,                       | 713:23, 714:18,                             |
| 620:20, 620:22,                 | 719:9, 746:14,<br>774:11                    | 662:13, 665:17,                  | 590:13, 590:16,                            | 715:13, 716:7,                              |
| 623:15, 645:23,                 | paid [2] - 605:12,                          | 668:20, 671:16,                  | 590:19, 590:20,                            | 716:15, 743:21,                             |
| 645:24, 646:5,                  | -   | 674:12, 692:21,                  | 592:16, 592:17,                            | 744:12                                      |
| 647:16, 647:18,                 | 634:19                                      | 733:12, 733:14,                  | 594:6, 594:7,                              | <b>Phase</b> [3] - 630:14,                  |
| 731:16                          | parameters [1] - 746:3                      | 733:24, 735:7,                   | 596:22, 635:17,                            | 630:19                                      |
| overhead [2] - 670:9,           | parcel [1] - 658:12                         | 736:13, 738:8,                   | 635:22, 638:1,                             | phase-in [14] - 691:19,                     |
| 670:12                          | PARKER [1] - 614:7                          | 738:19, 741:23,                  | 655:8, 669:2, 673:7,                       | 692:10, 693:18,                             |
| Overnight [1] - 575:21          | <b>Parker</b> [11] - 573:12, 589:20, 614:4, | 750:13                           | 676:5, 687:7,                              | 708:5, 711:24,                              |
| overview [1] - 585:20           | 614:5, 614:18,                              | parts [7] - 600:20,              | 687:17, 687:18,                            | 713:11, 713:16,                             |
| <b>own</b> [9] <b>-</b> 592:13, | ' '   | 601:2, 608:20,                   | 713:21, 713:24,                            | 713:23, 715:13,                             |
| 593:13, 610:2,                  | 615:9, 616:6,<br>616:10, 618:25             | 613:7, 623:7,                    | 715:3, 715:4, 715:6,                       | 716:7, 716:15,                              |
| 610:4, 627:4,                   | 616:10, 618:25,<br>620:4, 620:25            | 736:17, 737:10                   | 716:25, 722:14,                            | 743:21, 744:12                              |
| 652:18, 653:1,                  | 620:4, 620:25                               | party [5] - 576:15,              | 728:13, 728:18,                            | phase-ins [1] - 714:18                      |
| 652.12 715.17                   | Parker's [1] - 589:22                       | 583:15, 585:16,                  | 728:21, 728:22                             | phased [3] - 689:23,                        |
| 653:12, 745:17                  | Darkway (4) 570.00                          | E00.00 000 0                     |  |   |
| 033.12, 743.17                  | Parkway [1] - 570:22<br>parse [2] - 681:2,  | 586:20, 602:9  past [2] - 611:7, | percent) [1] - 590:18<br>percentage [15] - | 691:4, 700:18 <b>phased-in</b> [2] - 691:4, |

| 700:18                                       |
|--|
| phasing [2] - 691:20,                        |
| 716:13                                       |
| <b>phone</b> [8] - 586:3,                    |
| 586:17, 589:8,                               |
| 594:21, 594:23,                              |
| 599:18, 601:2,                               |
| 608:12                                       |
| phones [1] - 587:15                          |
| phrase [1] - 611:15                          |
| •  |
| picked [1] - 683:22                          |
| <b>piece</b> [6] - 598:11,<br>606:17, 611:2, |
|  |
| 635:12, 650:4, 688:4                         |
| pieces [8] - 584:23,                         |
| 599:15, 601:3,                               |
| 608:20, 613:7,                               |
| 635:11, 733:7,                               |
| 747:20                                       |
| Piedmont [1] - 580:22                        |
| pilot [1] - 646:2                            |
| <b>pin</b> [1] - 694:8                       |
| place [6] - 614:16,                          |
| 621:15, 714:23,                              |
| 731:2, 774:5, 774:8                          |
| placed [2] - 599:18,                         |
| 636:21                                       |
| plan [9] - 592:25,                           |
| 595:12, 603:20,                              |
| 607:13, 617:19,                              |
| 619:8, 669:14,                               |
| 717:11, 742:15                               |
| planning [1] - 637:22                        |
| plans [5] - 668:16,                          |
| 668:19, 669:17,                              |
| 669:18, 672:15                               |
| plant [1] - 681:7                            |
| <b>platform</b> [3] - 593:22,                |
| 593:23, 658:21                               |
|  |
| playing [1] - 644:5                          |
| Plaza [1] - 577:25                           |
| point [13] - 575:8,                          |
| 626:16, 632:4,                               |
| 632:14, 654:10,                              |
| 668:24, 685:24,                              |
| 686:10, 688:7,                               |
| 690:19, 691:1,                               |
| 691:2, 750:5                                 |
| pointed [1] - 697:11                         |
| points [1] - 619:2                           |
| <b>policy</b> [5] - 644:17,                  |
| 645:8, 645:19,                               |
| 646:10, 648:25                               |
| <b>pool</b> [3] - 639:14,                    |
| 642:18, 699:11                               |
| pops [1] - 595:20                            |
| · ·  |

```
portal [2] - 592:10,
 594.21
portion [4] - 631:19,
 664:11, 675:24,
 751:9
portions [2] - 615:10,
 674:23
posed [2] - 615:24,
 621:25
position [22] - 584:15,
 614:20, 631:12,
 634:18, 635:18,
 637:14, 645:7,
 647:16, 648:5,
 648:8, 653:25,
 654:7, 674:3,
 685:10, 693:25,
 694:1, 694:12,
 694:16, 695:18,
 700:5, 712:8, 745:10
positions [1] - 654:5
possibility [2] -
 612:11, 700:5
possible [5] - 665:4,
 679:16. 679:20.
 684:12, 719:20
post [1] - 609:15
postcard [1] - 600:21
potential [6] - 644:13,
 685:15, 686:7,
 698:15, 698:16,
 743:21
potentially [3] - 581:2,
 660:13, 699:24
POWER [1] - 569:7
Power [8] - 577:2,
 583:25, 584:5,
 656:2, 728:7,
 728:11, 728:12,
 742:2
practices [1] - 600:16
predicated [1] - 699:4
predictable [1] -
 650:23
prefer [1] - 684:18
preference [2] -
 713:13, 716:16
prefiled [7] - 615:1,
 615:25, 621:23,
 622:1, 729:24, 730:3
prehearing [1] - 673:2
prelude [1] - 626:23
premise [3] - 597:22,
 598:16, 598:19
prepare [1] - 674:6
prepared [1] - 631:15
```

prepping [1] - 633:2 662:11, 674:8, 674:13, 674:16, present [2] - 580:25, 674:20, 680:16, 623:21 presented [9] - 579:8, 687:2, 689:17, 637:19, 655:4, 725:12, 745:2 677:13, 680:14, proceedings [4] -602:3. 692:14. 680:15, 702:4, 751:10. 774:8 702:6, 727:25 process [32] - 585:7, presently [1] - 716:5 585:21, 591:6, presents [1] - 679:6 597:14, 599:7, Presiding [1] - 569:17 599:9, 600:19, presumably [1] -603:9, 603:16, 653:15 612:7, 612:14, pretty [4] - 609:2, 615:18, 622:23, 643:12, 719:16, 622:25, 623:22, 734:16 624:8, 624:9, previous [3] - 597:14, 627:10, 628:1, 626:23, 687:2 628:2, 628:11, previously [10] -633:18, 634:1, 590:23, 620:12, 658:3, 661:1, 626:7, 643:18, 661:22, 665:16, 656:3, 656:7, 675:5, 668:20, 672:22, 710:3, 742:3, 742:9 731:19, 732:22, **price** [4] - 649:7, 735:2 649:8, 649:9, 728:9 processing [1] pricing [8] - 724:6, 599:14 724:12, 742:21, produced [2] - 645:10, 745:22, 745:23, 727:14 746:1, 746:9, 747:9 produces [1] - 627:18 **primarily** [1] - 640:22 product [2] - 599:2, principle [2] - 636:20, 721:22 707:2 production [5] principles [1] - 706:25 637:1, 637:3, 637:7, prioritized [1] - 588:24 702:1, 702:9 priority [1] - 604:11 professor [2] - 577:22, **private** [2] - 730:15, 577:23 737:6 program [4] - 657:3, problem [4] - 580:24, 697:2, 731:13, 737:3 582:13, 639:23, programs [14] - 725:5, 640:24 725:8, 726:7, 726:9, problems [3] - 580:19, 730:16, 730:19, 600:17, 641:24 730:21, 730:23, procedure [2] - 598:9, 731:8, 731:20, 603:17 732:14, 732:20, procedures [1] -733:9, 735:17 591:14 prohibits [3] - 735:10, proceed [2] - 677:7, 736:16, 736:18 710:10 project [1] - 671:13 proceeding [27] project-specific [1] -614:23, 615:4, 671:13 619:13, 620:5, projected [1] - 727:17 621:20, 630:21, projections [2] -633:8, 633:13, 650:13, 651:4 633:16, 633:18, projects [1] - 661:18 646:10, 646:11, proper [1] - 713:16 646:12, 647:24, properly [1] - 706:18 648:3, 649:2, 662:2,

proposal [4] - 647:1, 691:15, 691:16, 746:1 proposed [13] -617:12, 622:16, 624:19, 637:8, 689:16, 697:24, 698:10, 719:10, 719:17, 721:3, 725:3, 726:16, 732:20 proposing [3] - 606:6, 610:24, 680:11 protections [2] -636:5, 636:6 provide [21] - 575:22, 584:18, 593:1, 604:19, 606:18, 608:4, 626:15, 628:9, 651:7, 658:1, 658:2, 658:5, 660:7, 660:10, 660:11, 661:3, 661:6, 667:17, 687:3, 689:10, 739:18 provided [16] -575:18, 590:25, 596:21, 599:6, 626:7, 646:20, 659:9, 659:10, 669:21, 669:25, 679:1, 694:3, 699:11, 730:25, 736:14, 737:21 providers [2] - 602:9, 610:8 provides [5] - 622:11, 636:12, 659:22, 666:3, 666:11 providing [10] -612:25, 629:1, 634:4, 637:6, 637:16, 667:5, 735:13, 736:1, 746:20, 746:21 proving [1] - 631:21 provision [3] - 695:5, 748:5, 748:14 provisions [8] -626:13, 635:8, 746:5, 746:7, 746:10, 746:17, 747:2, 748:16 proxy [10] - 579:25, 583:4, 639:14, 639:23, 640:14, 640:18, 641:16,

|                                | 1                       |                                     | 1                      | T                           |
|--------------------------------|-------------------------|-------------------------------------|------------------------|-----------------------------|
| 641:17, 641:25,                | questions [59] - 575:6, | 612:24, 613:2,                      | 650:20, 651:3,         | 720:15, 725:25,             |
| 642:3                          | 576:4, 578:12,          | 617:13, 617:21,                     | 669:20, 706:13,        | 726:24, 746:8               |
| <b>prudence</b> [1] - 636:10   | 578:19, 582:15,         | 618:16, 619:10,                     | 708:22, 712:14,        | reason [6] - 581:6,         |
| <b>PTC</b> [7] - 635:14,       | 583:16, 585:13,         | 619:13, 619:14,                     | 715:8, 715:11,         | 652:20, 685:18,             |
| 635:15, 635:17,                | 585:14, 585:15,         | 619:20, 620:5,                      | 716:3, 719:10,         | 686:15, 694:1, 715:8        |
| 635:20, 635:21,                | 585:17, 597:2,          | 623:12, 627:23,                     | 720:1, 720:21,         | reasonable [8] -            |
| 650:1, 650:17                  | 598:22, 607:25,         | 630:23, 631:23,                     | 721:12, 722:4,         | 622:13, 622:17,             |
| public [20] - 575:25,          | 608:5, 608:8,           | 632:3, 632:5,                       | 723:15, 728:7,         | 622:20, 635:4,              |
| 622:14, 623:25,                | 610:20, 611:14,         | 632:10, 632:11,                     | 728:23, 735:14,        | 641:21, 643:3,              |
| 624:5, 624:11,                 | 613:2, 613:14,          | 632:15, 632:17,                     | 736:1, 742:25,         | 683:22, 714:19              |
| 626:2, 636:15,                 | 613:23, 615:24,         | 632:21, 633:2,                      | 743:7, 744:10,         | reasonably [1] -            |
| 654:22, 655:8,                 | 618:21, 621:25,         | 633:18, 633:19,                     | 748:10                 | 640:12                      |
| 655:15, 727:22,                | 631:2, 631:25,          | 635:5, 637:23,                      | rates/charges [1] -    | reasons [6] - 580:24,       |
| 727:23, 728:2,                 | 635:1, 639:7,           | 646:10, 647:24,                     | 590:8                  | 637:23, 671:18,             |
| 735:11, 735:20,                | 651:12, 651:13,         | 648:3, 648:19,                      | rather [6] - 585:13,   | 684:22, 740:17,             |
| 735:24, 737:8,                 | 652:1, 652:9,           | 648:20, 649:2,                      | 601:21, 605:14,        | 746:12                      |
| 737:20, 741:23,                | 652:17, 654:14,         | 649:18, 651:19,                     | 606:22, 696:14,        | reassure [1] - 597:11       |
| 747:7                          | 654:16, 655:19,         | 651:24, 653:16,                     | 725:11                 | rebalance [1] - 687:13      |
| pull [11] - 578:2,             | 669:10, 671:20,         | 653:23, 660:10,                     | ratios [2] - 678:14,   | rebuild [1] - 658:17        |
| 616:23, 617:6,                 | 688:10, 688:12,         | 673:5, 676:1, 678:7,                | 678:25                 | rebuilding [1] - 673:6      |
| 655:13, 677:15,                | 688:15, 692:21,         | 679:24, 680:11,                     | RE [1] - 569:6         | •                           |
| 690:5, 699:9,                  | 694:18, 699:21,         | 680:16, 684:25,                     |                        | Rebuttal [2] - 677:11,      |
| 1                              | 703:24, 710:19,         | 685:3, 686:5, 687:2,                | reach [1] - 716:21     | 677:16                      |
| 699:14, 701:9,<br>736:8, 750:3 | 713:8, 715:17,          | 687:21, 688:6,                      | reaching [4] - 610:11, | rebuttal [28] - 578:10,     |
| 1                              | 719:1, 719:5, 719:8,    | 689:19, 689:24,                     | 623:8, 625:23,         | 578:16, 614:23,             |
| pulled [4] - 601:1,            | 729:4, 730:6,           | 692:14, 713:18,                     | 631:12                 | 615:19, 621:20,             |
| 601:19, 611:17,                | 730:12, 731:24,         | 719:3, 720:6, 721:3,                | read [17] - 589:22,    | 626:17, 630:3,              |
| 658:23                         | 737:13, 737:15,         | 721:9, 721:13,                      | 590:3, 590:4,          | 636:3, 638:25,              |
| <b>pulse</b> [2] - 698:3,      | 744:20, 749:18,         | 721:15, 721:16,                     | 590:10, 609:5,         | 644:12, 654:3,              |
| 699:6                          | 750:12                  | 721:15, 721:16,                     | 671:7, 671:25,         | 654:4, 663:15,              |
| <b>punish</b> [1] - 719:10     |                         | 721.23, 722.1, 722:6, 722:7, 722:9, | 686:22, 695:2,         | 674:7, 674:19,              |
| punishment [1] -               | quibbles [1] - 697:9    | 722:10, 722:12,                     | 696:6, 696:17,         | 675:2, 678:5,               |
| 719:12                         | quick [2] - 593:11,     | 722:15, 722:16,                     | 696:22, 712:4,         | 678:23, 705:24,             |
| purchase [1] - 625:6           | 606:22                  | 725:3, 725:5, 725:7,                | 724:14, 735:19,        | 710:1, 710:2, 724:1,        |
| purchased [1] - 593:6          | quickly [3] - 586:5,    | 725:8, 725:20,                      | 735:22, 735:23         | 724:3, 729:25,              |
| pure [1] - 682:16              | 600:2, 610:23           | 726:11, 726:16,                     | readers [1] - 695:4    | 732:1, 734:24               |
| <b>PURPA</b> [2] - 647:23,     | quite [6] - 598:15,     | 720:11, 720:10,                     | readily [1] - 684:1    | recalculate [2] -           |
| 648:1                          | 602:17, 687:14,         | 727:17, 727:0,                      | reads [2] - 597:6,     | 714:5, 714:8                |
| <b>purposes</b> [2] - 688:19,  | 720:13, 720:24,         | 743:8, 745:2, 745:9,                | 698:25                 | recalled [5] - 573:6,       |
| 749:10                         | 725:17                  | 745:14, 745:15,                     | ready [2] - 612:12,    | 573:8, 573:9, 656:2,        |
| pursuant [5] - 569:14,         |                         |                                     | 705:3                  | 742:2                       |
| 575:5, 681:21,                 | R                       | 745:17, 746:5,<br>746:7, 746:9,     | real [2] - 592:18,     | recap [1] - 606:19          |
| 736:14, 750:18                 |                         | 746:7, 746.9,                       | 595:22                 | receipt [1] - 586:23        |
| <b>push</b> [1] - 633:24       | raise [3] - 584:3,      | Rate [3] - 740:1,                   | realistic [1] - 684:5  | receive [4] - 592:14,       |
| <b>put</b> [8] - 597:24,       | 662:24, 705:10          | 749:7, 749:8                        | really [33] - 582:8,   | 612:8, 637:12, 681:3        |
| 597:25, 614:1,                 | raised [5] - 624:9,     | · ·                                 | 591:23, 597:7,         | <b>RECEIVED</b> [1] - 574:9 |
| 633:25, 640:13,                | 654:1, 654:3,           | rate-case [5] - 631:23,             | 600:7, 601:2,          | received [12] - 583:2,      |
| 640:17, 671:4, 738:8           | 679:21, 734:25          | 632:3, 632:17,                      | 601:11, 601:21,        | 591:12, 599:15,             |
| putting [2] - 609:14,          | raising [1] - 619:4     | 632:21, 660:10                      | 602:18, 602:20,        | 600:10, 602:1,              |
| 641:2                          | range [1] - 642:14      | ratemaking [1] -                    | 611:11, 626:22,        | 609:7, 610:13,              |
|                                | range [1] - 642.14      | 660:12                              | 626:23, 628:24,        | 619:22, 635:1,              |
| Q                              | Rapids [6] - 570:3,     | ratepayers [3] -                    | 633:15, 633:16,        | 678:22, 703:15,             |
|                                | 585:9, 585:10,          | 632:24, 635:14,                     | 635:13, 636:4,         | 749:16                      |
|                                | 588:3, 588:10,          | 697:8                               | 640:8, 640:9,          | receives [3] - 596:4,       |
| qualified [1] - 748:8          |                         | rates [31] - 618:18,                | 642:17, 642:19,        | 629:12, 664:15              |
| quantify [1] - 661:20          | 588:11                  | 619:21, 624:20,                     | 648:1, 661:25,         | receiving [3] - 598:12,     |
| questioning [2] -              | rate [96] - 581:17,     | 633:25, 635:4,                      | 683:5, 689:6, 708:3,   | 618:6, 721:8                |
| 608:2, 664:6                   | 590:8, 610:11,          | 644:20, 646:9,                      | 708:14, 719:19,        | recent [4] - 619:9,         |
|                                |                         |                                     |                        |                             |

| 699:12, 707:17,<br>708:11, 708:22,<br>724:16, 774:9<br>duces [1] - 720:16<br>duction [29] -<br>616:21, 617:21,<br>617:22, 617:24,<br>618:6, 618:10,<br>619:2, 619:12,<br>619:16, 620:8,<br>620:14, 649:25,<br>650:3, 650:11,<br>650:17, 660:6,<br>661:8, 661:25, | 660:25  registered [2] - 593:11, 598:13  regular [11] - 721:9, 721:13, 721:15, 721:17, 722:1, 722:8, 722:9, 722:16, 722:23, 723:12, 726:11  regulated [6] - 577:23, 735:14, 735:17, 736:1, 736:4, 737:10  Regulatory [20] -  | rely [1] - 628:4<br>relying [2] - 643:2,<br>643:8<br>remain [1] - 730:7<br>remainder [1] - 588:10<br>remaining [5] - 644:8,<br>713:24, 714:9,<br>717:1, 717:2<br>remember [4] -<br>642:11, 642:13,<br>644:5, 698:9  | represented [1] - 677:18 represents [3] - 624:7, 636:4, 698:1 request [7] - 635:5, 662:10, 667:16, 718:24, 737:23, 747:22, 748:18 Request [2] - 677:12, 683:13 |
|--|--|---|--|
| 724:16, 774:9 duces [1] - 720:16 duction [29] - 616:21, 617:21, 617:22, 617:24, 618:6, 618:10, 619:2, 619:12, 619:16, 620:8, 620:14, 649:25, 650:3, 650:11, 650:17, 660:6, 661:8, 661:25,  | 593:11, 598:13  regular [11] - 721:9, 721:13, 721:15, 721:17, 722:1, 722:8, 722:9, 722:16, 722:23, 723:12, 726:11  regulated [6] - 577:23, 735:14, 735:17, 736:1, 736:4, 737:10  | 643:8<br>remain [1] - 730:7<br>remainder [1] - 588:10<br>remaining [5] - 644:8,<br>713:24, 714:9,<br>717:1, 717:2<br>remember [4] -<br>642:11, 642:13,  | represents [3] - 624:7,<br>636:4, 698:1<br>request [7] - 635:5,<br>662:10, 667:16,<br>718:24, 737:23,<br>747:22, 748:18<br>Request [2] - 677:12,<br>683:13     |
| duces [1] - 720:16<br>duction [29] -<br>616:21, 617:21,<br>617:22, 617:24,<br>618:6, 618:10,<br>619:2, 619:12,<br>619:16, 620:8,<br>620:14, 649:25,<br>650:3, 650:11,<br>650:17, 660:6,<br>661:8, 661:25,  | regular [11] - 721:9,<br>721:13, 721:15,<br>721:17, 722:1,<br>722:8, 722:9,<br>722:16, 722:23,<br>723:12, 726:11<br>regulated [6] - 577:23,<br>735:14, 735:17,<br>736:1, 736:4, 737:10   | remain [1] - 730:7<br>remainder [1] - 588:10<br>remaining [5] - 644:8,<br>713:24, 714:9,<br>717:1, 717:2<br>remember [4] -<br>642:11, 642:13,   | 636:4, 698:1 request [7] - 635:5, 662:10, 667:16, 718:24, 737:23, 747:22, 748:18 Request [2] - 677:12, 683:13  |
| duction [29] - 616:21, 617:21, 617:22, 617:24, 618:6, 618:10, 619:2, 619:12, 619:16, 620:8, 620:14, 649:25, 650:3, 650:11, 650:17, 660:6, 661:8, 661:25,   | 721:13, 721:15,<br>721:17, 722:1,<br>722:8, 722:9,<br>722:16, 722:23,<br>723:12, 726:11<br>regulated [6] - 577:23,<br>735:14, 735:17,<br>736:1, 736:4, 737:10  | remainder [1] - 588:10<br>remaining [5] - 644:8,<br>713:24, 714:9,<br>717:1, 717:2<br>remember [4] -<br>642:11, 642:13,   | request [7] - 635:5,<br>662:10, 667:16,<br>718:24, 737:23,<br>747:22, 748:18<br>Request [2] - 677:12,<br>683:13  |
| 616:21, 617:21,<br>617:22, 617:24,<br>618:6, 618:10,<br>619:2, 619:12,<br>619:16, 620:8,<br>620:14, 649:25,<br>650:3, 650:11,<br>650:17, 660:6,<br>661:8, 661:25,  | 721:17, 722:1,<br>722:8, 722:9,<br>722:16, 722:23,<br>723:12, 726:11<br>regulated [6] - 577:23,<br>735:14, 735:17,<br>736:1, 736:4, 737:10   | remaining [5] - 644:8,<br>713:24, 714:9,<br>717:1, 717:2<br>remember [4] -<br>642:11, 642:13,   | 662:10, 667:16,<br>718:24, 737:23,<br>747:22, 748:18<br><b>Request</b> [2] - 677:12,<br>683:13   |
| 617:22, 617:24,<br>618:6, 618:10,<br>619:2, 619:12,<br>619:16, 620:8,<br>620:14, 649:25,<br>650:3, 650:11,<br>650:17, 660:6,<br>661:8, 661:25,   | 722:8, 722:9,<br>722:16, 722:23,<br>723:12, 726:11<br><b>regulated</b> [6] - 577:23,<br>735:14, 735:17,<br>736:1, 736:4, 737:10  | 713:24, 714:9,<br>717:1, 717:2<br>remember [4] -<br>642:11, 642:13,   | 718:24, 737:23,<br>747:22, 748:18<br><b>Request</b> [2] - 677:12,<br>683:13  |
| 518:6, 618:10,<br>519:2, 619:12,<br>519:16, 620:8,<br>520:14, 649:25,<br>550:3, 650:11,<br>550:17, 660:6,<br>561:8, 661:25,  | 722:16, 722:23,<br>723:12, 726:11<br><b>regulated</b> [6] - 577:23,<br>735:14, 735:17,<br>736:1, 736:4, 737:10   | 717:1, 717:2<br><b>remember</b> [4] -<br>642:11, 642:13,  | 747:22, 748:18 <b>Request</b> [2] - 677:12, 683:13   |
| 619:2, 619:12,<br>619:16, 620:8,<br>620:14, 649:25,<br>650:3, 650:11,<br>650:17, 660:6,<br>661:8, 661:25,  | 723:12, 726:11<br>regulated [6] - 577:23,<br>735:14, 735:17,<br>736:1, 736:4, 737:10   | remember [4] - 642:11, 642:13,  | <b>Request</b> [2] - 677:12, 683:13  |
| 519:16, 620:8,<br>520:14, 649:25,<br>550:3, 650:11,<br>550:17, 660:6,<br>561:8, 661:25,  | regulated [6] - 577:23,<br>735:14, 735:17,<br>736:1, 736:4, 737:10   | 642:11, 642:13,   | 683:13   |
| 520:14, 649:25,<br>550:3, 650:11,<br>550:17, 660:6,<br>561:8, 661:25,  | 735:14, 735:17,<br>736:1, 736:4, 737:10  |   |  |
| 650:3, 650:11,<br>650:17, 660:6,<br>661:8, 661:25,   | 736:1, 736:4, 737:10   | 044.5, 096.9  | roquested (4) 742:6  |
| 650:17, 660:6,<br>661:8, 661:25,   |  | remind [1] - 657:20   | requested [1] - 742:6<br>requesting [2] - 607:4,   |
| 661:8, 661:25,   |  |   | 659:10   |
|  | 627:11, 627:18,  | reminded [1] - 703:7  | requests [7] - 629:8,  |
| 697:23, 707:7,   | 628:6, 628:8,  | reminders [1] - 593:15  | 634:14, 659:9,   |
| 707:21, 708:8,   | 628:17, 628:19,  | remove [1] - 582:4  | 661:9, 661:14,   |
|  |  | removed [4] - 581:4,  | 661:25, 662:1  |
|  | · · · · · · · · · · · · · · · · · · ·  |   | require [4] - 732:5,   |
| 711:6, 724:18  | , ,  |   | 739:15, 745:19,  |
| ·  | · · · · · ·  | · ·   | 748:21   |
|  |  |   | required [5] - 632:14,   |
| •  | · · · · · ·  | • •   | 670:13, 704:4,   |
| 726:17, 730:14   | · · · · · · · · · · · · · · · · · · ·  |   | 731:5, 744:23  |
| ference [10] -   |  |   | requirement [11] -   |
| 609:14, 615:7,   | •  |   | 597:15, 599:8,   |
| 615:15, 616:17,  |  |   | 623:13, 623:14,  |
| 635:25, 679:23,  | 682:23   |   | 623:15, 624:3,   |
| 710:14, 727:3,   | related [19] - 577:11,   | •   | 624:12, 635:3,   |
| 749:10   | 590:7, 596:4,  |   | 745:4, 745:5, 748:3  |
| ferenced [2] - 696:8,  | 596:23, 600:16,  | ·   | requirements [8] -   |
| 698:5  | 602:8, 603:12,   |   | 647:23, 648:2,   |
| ferences [3] - 615:4,  | 628:21, 628:22,  | =   | 648:17, 648:19,  |
| 674:16, 674:20   | 629:14, 633:12,  |   | 648:25, 650:1, 746:7   |
| ferencing [1] -  | 636:7, 668:7,  | =   | requires [2] - 746:15,   |
| 390:15   | 689:19, 698:23,  | ·   | 750:23   |
| ferred [3] - 582:1,  | 719:2, 724:22,   |   | requiring [1] - 644:19   |
| 616:11, 719:4  | 739:16, 747:7  | •   | <b>RER</b> [2] - 575:18,   |
| ferring [4] - 689:24,  |  |   | 575:23   |
| 689:25, 712:10,  | 599:7, 600:10,   | •   | research [4] - 670:10,   |
| 737:12   |  |   | 689:2, 689:3, 689:4  |
| fers [1] - 623:6   | relation [1] - 635:4   |   | reset [3] - 716:20,  |
| flect [2] - 644:21,  | relationship [1] -   |   | 717:11, 717:12   |
| 724:7  | 626:8  | •   | resetting [1] - 717:9  |
| flects [1] - 714:11  | relative [7] - 661:19,   | -   | reside [1] - 588:17  |
| fresh [1] - 667:11   | 719:25, 720:17,  |   | residential [9] -  |
| fund [3] - 605:9,  |  | ,   | 605:24, 678:14,  |
| 605:16   |  | •   | 679:1, 679:17,   |
| fundable [1] -   | relatively [1] - 712:23  | •   | 686:5, 687:9,  |
| 605:11   | release [1] - 740:16   | · · ·   | 693:10, 693:15,  |
| gard [3] - 658:1,  | reliability [8] - 664:13,  |   | 693:22   |
| 668:4, 720:1   | · · · · · · · · · · · · · · · · · · ·  | •   | resolution [2] -   |
| garding [7] -  | 667:13, 668:6,   |   | 609:10, 609:11   |
| 600:11, 615:3,   | 668:9, 671:12  | •   | resolve [1] - 586:16   |
| 623:15, 632:15,  | reliance [5] - 640:17,   | · ·   | resolved [2] - 623:4,  |
| 672:13, 716:6,   | 641:5, 641:13,   |   | 630:8  |
| 743:20   | 641:15, 641:16   | •   | resonates [2] -  |
| gardless [1] -   | reluctant [1] - 580:18   |   | 612:18, 613:5  |
| 77 W 6 M 7 M 6 G 6 7 7 M 6 M 6 M 6 M 6 M 6 M 6 M 6 M 6 M   | ductions [2] - 517:11, 700:2 fer [3] - 686:16, 726:17, 730:14 ference [10] - 509:14, 615:7, 515:15, 616:17, 535:25, 679:23, 710:14, 727:3, 749:10 ferenced [2] - 696:8, 598:5 ferences [3] - 615:4, 574:16, 674:20 ferencing [1] - 590:15 ferred [3] - 582:1, 516:11, 719:4 ferring [4] - 689:24, 589:25, 712:10, 737:12 fers [1] - 623:6 flect [2] - 644:21, 724:7 flects [1] - 714:11 fund [3] - 605:9, 505:16 fundable [1] - 505:11 gard [3] - 658:1, 568:4, 720:1 garding [7] - 500:11, 615:3, 523:15, 632:15, 572:13, 716:6, 743:20 | 708:22, 708:25, 711:6, 724:18  ductions [2] - 631:17, 631:18, 632:9, 658:23, 659:1, 659:18, 659:25, 661:12  ference [10] - 609:14, 615:7, 615:15, 616:17, 635:25, 679:23, 710:14, 727:3, 749:10  ferenced [2] - 696:8, 698:5  ferences [3] - 615:4, 674:10, 674:20  ferencing [1] - 690:15  ferering [4] - 689:24, 739:15, 712:10, 737:12  fers [1] - 623:6  flect [2] - 644:21, 724:7  flect [2] - 644:21, 724:7  fund [3] - 605:9, 629:19, 629:19, 631:18, 632:9, 658:11, 659:18, 659:18, 659:18, 659:18, 659:18, 659:18, 669:23, 661:12  regulatory [6] - 586:9, 627:19, 636:20, 660:23, 661:12  regulatory [6] - 586:9, 627:19, 636:20, 660:23, 661:12  regulatory [6] - 586:9, 627:19, 636:20, 660:23, 661:22, 682:23  related [19] - 577:11, 590:7, 596:4, 596:23, 600:16, 602:8, 603:12, 628:21, 628:22, 629:14, 633:12, 636:7, 668:7, 689:19, 698:23, 719:2, 724:22, 739:16, 747:7  relates [6] - 591:13, 599:7, 600:10, 602:5, 603:9, 654:13  relation [1] - 635:4  relationship [1] - 626:8  relative [7] - 661:19, 719:25, 720:17, 720:19, 721:22, 723:8, 723:21  relatively [1] - 712:23  release [1] - 740:16  reliability [8] - 664:13, 665:1, 667:7, 667:8, 667:13, 668:6, 668:9, 671:12  reliance [5] - 640:17, 641:5, 641:13, 641:15, 641:16 | 108:22, 708:25, 711:6, 724:18  |

rock [1] - 644:6

rock-out [1] - 644:6

| respect [13] - 622:8,  |
|--|
| 632:3, 649:19,   |
| 656:14, 656:15,  |
| 667:8, 668:17,   |
| 695:16, 697:1,   |
| 697:16, 700:3,   |
| 727:17, 730:20   |
| respond [5] - 586:5,   |
| 586:20, 601:24,  |
| 719:6, 731:12  |
| responded [1] - 662:2  |
| response [17] -  |
| 582:22, 583:17,  |
| 585:18, 616:7,   |
| 626:12, 631:7,   |
| 652:16, 677:12,  |
|  |
| 683:13, 703:11,<br>703:18, 725:7,                                |
| 734:21, 739:6,   |
| 744:22, 749:19,  |
| 750:14   |
| responses [1] -  |
| 738:13   |
| responsibilities [1] -   |
| 584:25   |
| responsibility [1] -   |
| 602:21   |
| responsible [1] -  |
| 585:2  |
| restate [2] - 585:14,  |
| 626:14   |
| result [9] - 580:5,  |
| 580:10, 610:21,  |
| 619:9, 650:14,   |
| 651:8, 690:2, 691:3,   |
| 713:19   |
| resulted [3] - 676:16,   |
| 678:8, 687:6   |
| resulting [5] - 678:7,   |
| 706:13, 712:5,   |
| 712:6, 716:3   |
| results [22] - 579:9,  |
| 579:12, 583:11,  |
| 627:19, 628:10,  |
| 629:20, 629:25,  |
|  |
| 641:7, 641:9,  |
| 641:16, 641:17,  |
| 642:24, 643:2,   |
| 643:7, 643:8,  |
| 679:15, 689:25,  |
| 690:20, 723:2,   |
| 723:9, 723:11,   |
| 727:25   |
| return [6] - 635:17,   |
| 007 00 007 04  |
| 637:23, 637:24,  |
| 637:23, 637:24,<br>638:1, 703:21, 704:1<br>returned [1] - 741:20 |

```
returning [1] - 688:18
reuse [2] - 608:21,
 609:2
revenue [19] - 623:13,
 623:14, 623:15,
 624:3, 624:12,
 635:3, 650:1,
 685:15, 685:16,
 686:8, 687:1, 687:6,
 687:15, 707:8,
 707:17, 708:9,
 716:15, 716:19,
 724:8
revenues [9] - 684:19,
 687:18, 690:3,
 691:22, 706:17,
 707:5, 707:21,
 708:11, 708:21
reverse [1] - 580:16
reversed [1] - 693:20
review [11] - 610:11,
 615:18, 645:8,
 645:16, 648:6,
 651:19, 668:20,
 676:9, 690:11,
 692:14, 748:9
reviewing [2] -
 610:10, 626:25
revisit [1] - 685:4
reward [1] - 726:12
reword [1] - 612:17
RICHARD [1] - 569:18
rider [15] - 617:16,
 617:22, 632:19,
 632:22, 646:2,
 650:3, 650:8,
 650:12, 650:14,
 650:19, 651:5,
 652:5, 700:7,
 716:18, 748:11
Rider [9] - 606:6,
 612:24, 617:17,
 618:17, 618:19,
 637:9. 649:20.
 655:5. 655:9
riders [3] - 619:23,
 619:24, 748:10
risen [1] - 680:5
risk [4] - 641:19,
 643:3, 643:6, 650:4
ROBERT [2] - 705:12,
 709:19
Robert [5] - 573:21,
 573:23, 705:6,
 705:22, 709:18
```

Robinson [1] - 577:24

robust [1] - 731:18

```
ROE [3] - 579:21,
 579:25, 583:9
ROGER [1] - 577:1
Roger [3] - 573:4,
 576:23, 577:21
roll [5] - 592:21,
 696:17, 696:19,
 696:22, 750:23
roll-call [1] - 750:23
rolling [3] - 600:19,
 695:1, 696:5
rollout [2] - 600:12,
 608:9
rolls [1] - 699:25
room [3] - 728:1,
 743:10, 743:17
roommate [3] -
 597:19, 597:21,
 611:25
rough [2] - 687:13,
 693:13
roughly [2] - 687:7,
 698:12
rounded [1] - 580:6
row [2] - 678:14,
 678:17
rows [2] - 678:12,
 701:22
RPU-10-1 [2] - 680:9,
 680:15
RPU-17-1 [3] - 679:21,
 680:10, 680:14
RPU-19-2 [1] - 582:21
RPU-2016-2[1] -
 581:17
RPU-2017-0001 [1] -
 710:15
RPU-2017-1 [1] -
 687:5
rPU-2019-0001 [1] -
 569.6
RPU-2019-0001 [1] -
 578:10
RPU-2019-0002 [2] -
 578:15, 579:15
RPU-2019-2[2] -
 576:21, 583:1
RTS [12] - 644:8,
 644:14, 646:2,
 711:7, 713:19,
 716:18, 716:20,
 717:9, 717:11,
 717:12, 717:15,
 744:4
```

```
rule [7] - 597:19,

597:21, 598:6,

611:25, 623:6,

656:20, 699:5

rulemaking [1] - 668:3

rules [6] - 622:7,

631:8, 656:23,

667:8, 667:12,

667:25

run [7] - 580:14,

627:25, 628:2,

651:9, 658:16,

742:19, 745:16
```

S safety [3] - 667:17, 667:18, 671:12 sake [1] - 713:17 sales [2] - 650:16, 721:22 sample [5] - 580:23, 641:25, 642:7, 642:21, 642:22 samples [1] - 580:20 satisfied [1] - 595:3 satisfy [1] - 595:5 savings [1] - 693:15 schedule [1] - 727:1 scheduled [1] -738:12 schedules [4] - 639:2, 660:12, 660:18, 720:6 scheme [1] - 689:21 **SCHMIDT** [6] - 571:5, 729:14, 729:22, 730:9. 734:13. 737:15 Schmidt [3] - 729:12, 734:11, 737:14 Schramm [2] - 719:1, 727:13 Schultz [2] - 627:7, 637:20 scope [2] - 596:15, 641:19 Scott [2] - 573:17, 662:21 SCOTT[2] - 571:22, 663:1 screen [8] - 582:3, 582:6, 595:20, 618:3, 677:22,

719:15, 721:4, 738:9

screening [1] - 612:13

scroll [1] - 701:19 SE [1] - 570:3 seated [9] - 577:6, 614:12, 621:11, 638:19, 663:6, 673:20, 705:16, 709:24, 718:5 **Second** [1] - 569:11 second [9] - 577:8, 607:15, 667:1, 668:15, 684:11, 685:18, 685:22, 722:3, 750:20 seconded [1] - 750:22 seconds [1] - 587:3 section [5] - 575:5, 616:24, 619:25, 664:16, 671:8 Section [1] - 735:10 secure [1] - 650:21 secured [1] - 649:24 **securing** [1] - 649:25 see [23] - 595:2, 598:21, 604:22, 606:22, 613:5, 618:2, 618:10, 620:12, 628:25, 640:4, 667:10, 680:4, 701:20, 703:19, 721:2, 721:11, 721:12, 722:6, 736:8, 739:12, 744:4, 748:5 seeing [5] - 619:12, 635:16, 703:24, 704:6, 729:8 seek [1] - 742:16 seeking [1] - 747:18 seem [1] - 607:11 sees [1] - 740:4 self [5] - 585:4, 592:9, 595:2, 595:4, 720:14 self-generating [1] -720:14 self-service[4] -585:4, 592:9, 595:2, 595:4 Senate [1] - 733:15 send [1] - 613:11 sends [1] - 599:25 Senior [1] - 570:2 sense [5] - 581:8, 672:7, 672:20, 673:4, 681:12 sensitive [1] - 604:14 sensors [1] - 671:14

| sent [1] - 599:16                    | 735:14, 736:1,                | 635:12, 635:13,                  | 686:4, 686:11,                      | <b>small</b> [3] - 580:23,     |
|--------------------------------------|-------------------------------|----------------------------------|-------------------------------------|--------------------------------|
| <b>sentence</b> [7] - 615:16,        | 736:14, 742:16,               | 636:12, 636:15,                  | 694:4, 728:6, 729:1                 | 687:9, 688:2                   |
| 615:20, 671:8,                       | 742:17, 742:19,               | 636:17, 637:25,                  | <b>shrinking</b> [4] - 639:15,      | <b>smaller</b> [6] - 640:3,    |
| 671:15, 671:24,                      | 744:24, 745:3,                | 649:24, 665:15,                  | 642:10, 642:16,                     | 640:10, 699:15,                |
| 712:4, 713:3                         | 745:12, 745:16,               | 668:16, 668:24,                  | 642:18                              | 699:17, 708:11                 |
| sentences [1] - 686:24               | 746:23, 748:19                | 668:25, 671:5,                   | <b>side</b> [7] - 587:13,           | <b>smart</b> [3] - 594:20,     |
| <b>separate</b> [10] - 606:10,       | Service [1] - 570:21          | 674:11, 731:15,                  | 640:22, 640:23,                     | 594:23, 600:12                 |
| 618:18, 646:11,                      | service-type [1] -            | 731:16, 731:18,                  | 641:11, 719:20,                     | <b>SMITH</b> [1] - 572:2       |
| 652:22, 652:25,                      | 660:14                        | 732:8, 732:16,                   | 747:10                              | <b>Smith</b> [1] - 572:2       |
| 653:2, 653:10,                       | <b>serviced</b> [1] - 611:9   | 732:18, 738:11,                  | sided [1] - 677:23                  | <b>smooth</b> [1] - 596:1      |
| 653:12, 742:20,                      | <b>services</b> [9] - 584:17, | 738:13, 739:16                   | Sierra [1] - 571:8                  | <b>snippets</b> [1] - 593:18   |
| 743:3                                | 585:1, 646:14,                | settlements [1] -                | <b>sign</b> [3] - 592:13,           | social [1] - 593:16            |
| September [2] -                      | 647:13, 656:14,               | 622:8                            | 597:23, 610:2                       | socialization [2] -            |
| 638:25, 663:15                       | 656:15, 656:18,               | settling [6] - 622:24,           | signal [1] - 599:25                 | 680:25, 684:3                  |
| <b>serious</b> [1] - 625:12          | 656:25, 736:5                 | 665:17, 668:20,                  | significant [9] -                   | <b>socialize</b> [2] - 695:6,  |
| <b>seriously</b> [3] <b>-</b> 601:1, | serving [1] - 683:15          | 671:16, 735:7,                   | 598:16, 605:22,                     | 697:8                          |
| 602:22, 609:20                       | <b>SESSION</b> [1] - 705:1    | 736:13                           | 609:21, 650:3,                      | <b>socialized</b> [1] - 698:3  |
| <b>serve</b> [3] - 681:9,            | <b>session</b> [24] - 575:3,  | <b>seven</b> [2] - 597:6,        | 660:24, 670:8,                      | socializing [1] - 697:7        |
| 710:23, 726:5                        | 575:4, 575:8,                 | 611:5                            | 679:13, 688:9,                      | <b>software</b> [8] - 598:11,  |
| served [4] - 624:11,                 | 575:25, 614:1,                | <b>several</b> [4] - 593:5,      | 689:18                              | 598:25, 657:2,                 |
| 730:18, 748:3                        | 655:8, 655:14,                | 612:18, 660:3,                   | significantly [1] -                 | 681:20, 681:25,                |
| service [86] - 585:4,                | 658:7, 704:3, 738:2,          | 719:13                           | 716:4                               | 682:9, 682:11                  |
| 585:11, 585:21,                      | 738:5, 739:21,                | <b>shall</b> [4] <b>-</b> 671:9, | <b>signing</b> [1] - 597:25         | <b>solar</b> [7] - 645:3,      |
| 586:11, 587:8,                       | 739:22, 741:6,                | 671:10, 735:11,                  | <b>similar</b> [6] <b>-</b> 680:10, | 720:5, 720:14,                 |
| 588:14, 588:25,                      | 741:13, 741:15,               | 735:24                           | 694:10, 723:16,                     | 720:20, 730:23,                |
| 591:1, 592:9, 595:2,                 | 741:24, 749:21,               | <b>share</b> [2] - 592:11,       | 725:21, 745:22,                     | 737:7                          |
| 595:4, 598:2,                        | 750:7, 750:9,                 | 714:21                           | 746:25                              | solution [2] - 592:9,          |
| 598:18, 600:5,                       | 750:18, 750:22,               | <b>shared</b> [1] - 631:20       | similarities [1] - 643:5            | 730:24                         |
| 601:14, 602:9,                       | 751:5                         | shareholders [2] -               | <b>simple</b> [2] - 606:25,         | <b>solutions</b> [2] - 611:20, |
| 603:13, 603:18,                      | <b>sessions</b> [1] - 733:5   | 632:5, 633:1                     | 725:18                              | 731:4                          |
| 609:4, 611:3,                        | <b>set</b> [14] - 592:15,     | <b>sharing</b> [1] - 740:22      | <b>simplified</b> [1] - 606:19      | <b>someone</b> [5] - 586:18,   |
| 611:13, 613:1,                       | 593:1, 593:12,                | <b>SHEILA</b> [2] - 571:2,       | <b>simply</b> [3] - 585:20,         | 597:22, 597:23,                |
| 630:6, 633:19,                       | 594:17, 610:1,                | 614:7                            | 592:5, 724:7                        | 604:11, 604:13                 |
| 633:21, 633:23,                      | 617:10, 627:22,               | <b>Sheila</b> [3] - 573:12,      | <b>sit</b> [4] - 603:8, 653:8,      | sometime [2] -                 |
| 634:4, 636:21,                       | 634:8, 646:9,                 | 614:4, 614:18                    | 675:4, 714:20                       | 738:15, 739:13                 |
| 645:6, 646:5,                        | 647:22, 678:25,               | <b>shift</b> [6] - 687:6,        | site [3] - 613:12,                  | sometimes [4] -                |
| 646:20, 652:3,                       | 720:6, 743:7, 747:3           | 690:21, 691:3,                   | 627:15, 629:3                       | 589:18, 598:17,                |
| 652:8, 653:17,                       | <b>Seth</b> [3] - 573:18,     | 691:11, 712:17,                  | situation [5] - 591:10,             | 602:15, 602:16                 |
| 653:21, 653:22,                      | 673:14, 673:25                | 715:23                           | 599:24, 601:22,                     | somewhat [1] -                 |
| 660:14, 664:20,                      | <b>SETH</b> [1] - 673:15      | <b>shifting</b> [1] - 690:3      | 611:21, 737:1                       | 602:12                         |
| 667:12, 676:3,                       | settle [1] - 599:22           | <b>shifts</b> [4] - 689:19,      | situations [7] -                    | somewhere [2] -                |
| 680:23, 681:4,                       | settled [6] - 630:23,         | 689:25, 693:5, 693:9             | 601:18, 603:12,                     | 711:8, 738:17                  |
| 682:10, 687:19,                      | 631:13, 631:14,               | <b>shock</b> [3] - 687:21,       | 604:21, 611:24,                     | sorry [19] - 575:19,           |
| 688:8, 690:1,                        | 635:3, 644:11, 735:6          | 689:19, 689:24                   | 672:20, 708:1, 746:4                | 596:11, 632:7,                 |
| 691:21, 696:11,                      | settlement [46] -             | <b>short</b> [2] - 643:16,       | <b>six</b> [2] - 672:24, 697:9      | 644:1, 670:5, 672:1,           |
| 702:2, 702:22,                       | 615:2, 615:7,                 | 741:21                           | Sixth [1] - 570:19                  | 677:21, 678:12,                |
| 706:13, 707:9,                       | 622:12, 622:17,               | SHORTHAND[2] -                   | <b>size</b> [3] - 641:25,           | 680:12, 690:18,                |
| 707:16, 708:7,                       | 622:19, 622:22,               | 569:25, 774:17                   | 642:4, 685:15                       | 690:22, 691:9,                 |
| 708:19, 711:17,                      | 623:8, 623:14,                | Shorthand [1] - 774:2            | sizes [1] - 642:21                  | 697:14, 697:22,                |
| 716:2, 716:22,                       | 623:18, 623:22,               | shorthand [3] - 774:7,           | <b>SJW</b> [1] - 582:2              | 700:11, 701:2,                 |
| 717:16, 720:9,                       | 623:23, 623:25,               | 774:9, 774:12                    | slew [1] - 648:22                   | 702:18, 712:19,                |
| 720:13, 720:24,                      | 624:2, 624:8,                 | shot [1] - 656:12                | slight [1] - 601:23                 | 748:22                         |
| 721:8, 722:18,                       | 624:10, 624:13,               | <b>show</b> [1] - 690:19         | slightly [1] - 701:19               | sort [7] - 606:2,              |
| 722:20, 723:3,                       | 625:24, 626:2,                | showing [4] - 723:6,             | slippery [1] - 684:3                | 666:15, 672:16,                |
| 723:4, 723:5, 723:7,                 | 630:9, 630:10,                | 723:7, 723:12, 745:3             | <b>slope</b> [1] - 684:3            | 682:17, 685:18,                |
| 723:9, 723:10,                       | 630:15, 631:9,                | shows [8] - 627:13,              | slow [1] - 658:16                   | 726:11, 728:1                  |
| 723:11, 723:21,                      | 621.12 625.0                  |                                  | 310W [1] - 000.10                   |                                |
| 723.11, 723.21,                      | 631:13, 635:9,                | 670:11, 678:3,                   |                                     | sought [3] - 627:5,            |

| 628:22, 629:7                   | 732:12                       | statutory [1] - 736:22             | Strike [1] - 604:16           | <b>Suite</b> [12] - 570:13,   |
|---------------------------------|------------------------------|------------------------------------|-------------------------------|-------------------------------|
| sounds [2] - 607:12,            | staffed [1] - 586:4          | <b>stay</b> [3] - 589:18,          | string [1] - 714:22           | 570:16, 570:19,               |
| 714:25                          | <b>stage</b> [2] - 601:6,    | 664:9, 690:22                      | strived [1] - 662:12          | 570:22, 571:3,                |
| <b>South</b> [4] - 579:19,      | 658:12                       | <b>staying</b> [2] - 693:4,        | studies [2] - 668:11,         | 571:7, 571:12,                |
| 579:22, 579:25,                 | stakeholder [3] -            | 741:12                             | 706:13                        | 571:15, 571:21,               |
| 580:9                           | 636:7, 636:9, 731:19         | <b>stays</b> [1] - 645:11          | <b>study</b> [13] - 680:23,   | 571:24, 572:3, 572:6          |
| Southern [1] - 580:21           | stand [5] - 655:21,          | <b>step</b> [18] - 583:20,         | 681:4, 690:1,                 | <b>Sullivan</b> [1] - 570:21  |
| <b>space</b> [1] - 740:19       | 691:24, 709:18,              | 613:15, 620:25,                    | 691:21, 707:9,                | <b>sum</b> [1] - 702:7        |
| <b>speaking</b> [5] - 597:18,   | 729:15, 742:7                | 628:20, 628:24,                    | 707:16, 708:7,                | summarized [1] -              |
| 639:24, 660:8,                  | standard [7] - 582:9,        | 638:7, 654:17,                     | 708:19, 727:13,               | 661:2                         |
| 683:17, 702:17                  | 582:11, 597:15,              | 662:16, 673:9,                     | 727:22, 742:16,               | <b>summary</b> [2] - 584:18,  |
| speaking [1] -                  | 599:8, 630:12,               | 703:3, 709:13,                     | 742:19, 745:12                | 664:17                        |
| 702:20                          | 667:13, 673:5                | 716:25, 717:1,                     | <b>stuff</b> [2] - 692:14,    | <b>summed</b> [3] - 702:13,   |
| specialist [1] - 614:21         | standards [4] - 667:9,       | 717:14, 717:19,                    | 699:25                        | 702:14                        |
| <b>specific</b> [15] - 576:2,   | 667:19, 667:21,              | 729:9, 737:17,                     | stumbles [1] - 600:18         | summer [6] - 721:11,          |
| 585:13, 602:4,                  | 668:1                        | 749:22                             | subject [7] - 602:20,         | 721:16, 722:1,                |
| 611:21, 611:24,                 | standby [2] - 653:5,         | Stephens [14] -                    | 606:8, 683:1,                 | 722:10, 722:12,               |
| 642:6, 647:21,                  | 711:8                        | 573:23, 689:16,                    | 687:20, 688:18,               | 722:14                        |
| 647:22, 648:25,                 | <b>start</b> [7] - 585:20,   | 690:6, 709:18,                     | 742:25, 748:11                | summertime [1] -              |
| 649:1, 652:18,                  | 598:21, 611:3,               | 710:6, 710:18,                     | subject-matter [1] -          | 721:19                        |
| 665:9, 671:13,                  | 611:13, 615:12,              | 710:19, 710:22,                    | 602:20                        | supervision [1] -             |
| 726:17, 740:2                   | 664:9, 707:5                 | 713:9, 715:20,                     | <b>submitted</b> [1] - 590:14 | 774:10                        |
| specifically [20] -             | started [1] - 642:11         | 717:4, 717:6,                      | <b>submitting</b> [1] - 749:6 | supervisor [1] -              |
| 587:5, 590:21,                  | starting [5] - 575:14,       | 743:12, 743:13                     | subsequent [9] -              | 586:19                        |
| 604:12, 617:16,                 | 592:25, 595:11,              | STEPHENS [1] -                     | 615:3, 633:8,                 | supplemental [6] -            |
| 622:10, 639:20,                 | 658:16, 725:2                | 709:19                             | 633:13, 633:16,               | 719:3, 722:12,                |
| 640:16, 644:12,                 | <b>starts</b> [3] - 590:1,   | Stephens' [2] -                    | 633:17, 674:13,               | 723:10, 724:23,               |
| 645:25, 647:20,                 | 595:12, 669:1                | 690:12, 710:1                      | 674:16, 674:20,               | 725:13, 727:7                 |
| 648:13, 653:21,                 | <b>state</b> [15] - 577:19,  | <b>steps</b> [2] - 650:9,          | 692:13                        | Supplemental [14] -           |
| 657:15, 679:2,                  | 584:12, 589:12,              | 717:17                             | subsidiaries [1] -            | 719:18, 720:2,                |
| 682:14, 688:20,                 | 609:10, 614:16,              | stick [1] - 741:16                 | 640:1                         | 720:3, 720:7, 721:6,          |
| 697:2, 711:15,                  | 621:15, 624:16,              | <b>still</b> [18] - 583:10,        | subsidies [3] -               | 721:23, 722:5,                |
| 719:15, 735:11                  | 645:20, 673:24,              | 592:12, 594:24,                    | 706:14, 714:23,               | 722:15, 722:23,               |
| specify [1] - 627:17            | 705:20, 726:15,              | 597:10, 610:15,                    | 745:15                        | 723:13, 723:17,               |
| speculate [1] - 664:22          | 726:17, 727:2,               | 613:24, 623:10,                    | subsidization [7] -           | 723:18, 726:1, 726:3          |
| speed [1] - 587:2               | 733:18, 742:8                | 641:25, 651:6,                     | 734:25, 735:11,               | supplementary [1] -           |
| <b>spell</b> [2] - 577:19,      | <b>STATE</b> [1] - 569:1     | 651:7, 651:8, 652:7,               | 736:17, 736:22,               | 723:7                         |
| 584:12                          | <b>State</b> [4] - 569:10,   | 653:24, 693:24,                    | 737:2, 737:5, 737:9           | Supplementary [2] -           |
| spend [1] - 591:5               | 577:24, 727:9, 774:3         | 699:13, 736:22,                    | subsidizing [1] -             | 724:7, 725:4                  |
| spending [4] - 619:8,           | statement [6] -              | 743:23, 744:1<br>stipulation [1] - | 736:18                        | <b>support</b> [15] - 584:16, |
| 619:17, 668:7, 668:8            | 679:10, 679:22,              |                                    | <b>subsidy</b> [8] - 706:17,  | 585:1, 595:17,                |
| spends [1] - 683:15             | 712:11, 712:25,              | 718:17                             | 706:21, 707:4,                | 595:18, 627:5,                |
| <b>spin</b> [2] - 628:1         | 713:2, 727:3                 | stone [1] - 700:11                 | 707:7, 707:14,                | 627:8, 627:9,                 |
| <b>split</b> [1] - 678:9        | statements [3] -             | stood [1] - 728:2                  | 707:23, 708:13,               | 631:12, 631:16,               |
| <b>spread</b> [2] - 699:16,     | 664:2, 672:15, 728:2         | stop [1] - 687:10                  | 709:3                         | 635:9, 686:13,                |
| 718:16                          | states [3] - 587:18,         | stored [2] - 657:9,                | substantial [1] - 652:5       | 743:24, 744:1,                |
| <b>SPRIGGS</b> [1] - 569:25     | 587:20, 608:6                | 657:12                             | substantive [1] -             | 744:15, 745:9                 |
| <b>Staff</b> [2] - 571:6, 571:9 | static [1] - 709:6           | Storm [1] - 584:21                 | 748:16                        | supportive [2] -              |
| <b>staff</b> [23] - 585:11,     | <b>statistic</b> [1] - 582:9 | strategic [1] - 607:13             | subtopic [1] - 586:14         | 733:16, 733:19                |
| 586:2, 586:4, 586:9,            | statistical [3] -            | strategies [1] - 637:22            | suggest [3] - 686:7,          | supports [1] - 589:6          |
| 587:5, 587:6, 589:3,            | 605:21, 642:22,              | streamline [1] - 634:9             | 686:16, 730:16                | <b>suppose</b> [1] - 682:22   |
| 589:6, 589:12,                  | 642:23                       | Street [7] - 570:3,                | suggesting [2] -              | supposed [3] -                |
| 591:7, 591:16,                  | statistics [1] - 642:7       | 570:16, 570:19,                    | 676:8, 688:9                  | 633:22, 658:18,               |
| 600:23, 601:17,                 | <b>statute</b> [7] - 726:17, | 571:9, 571:11,                     | suggestion [1] - 676:1        | 669:7                         |
| 604:16, 604:18,                 | 726:19, 735:19,              | 571:20, 571:23                     | suggestions [2] -             | surprise [2] - 596:24,        |
| 608:5, 613:1, 658:7,            | 735:22, 736:16,              | <b>strike</b> [2] - 634:21,        | 603:6, 680:19                 | 605:8                         |
| 732:7, 732:10,                  | 736:25, 737:11               | 713:7                              | suggests [1] - 711:24         | <b>surprised</b> [1] - 603:22 |
|                                 |                              |                                    |                               | <u> </u>                      |
|                                 |                              |                                    |                               |                               |

surrebuttal [1] -718:11 surreplies [1] - 738:14 survey [1] - 595:3 Sutherland [1] -570:18 swiftly [1] - 609:19 swings [1] - 592:7 switch [5] - 643:22, 666:5, 666:9, 719:23, 722:2 sworn [16] - 577:3, 584:6, 614:9, 621:8, 638:16, 643:18, 656:3, 656:7, 663:3, 673:17, 705:14, 709:21, 718:3, 729:19, 742:3, 742:9 synopsis [2] - 664:16, 665:13 system [40] - 586:13, 586:20, 593:3, 593:4, 593:6, 595:19. 599:11. 599:13, 599:25, 601:3, 608:15, 608:16, 608:22, 608:24, 609:14, 609:16, 609:22, 609:23, 610:22, 645:11, 645:12, 647:3, 657:4, 657:8, 658:10, 658:13, 658:14, 658:15, 658:24, 659:22, 660:16, 661:5, 669:25, 671:13, 679:13, 697:2, 698:24, 710:23, 726:5 systems [4] - 594:19, 608:18, 640:3, 640:4

#### Т

tab [1] - 701:17 table [2] - 693:4, 728:6 Table [8] - 690:8, 690:15, 690:25, 691:8, 711:2, 711:5, 715:21, 722:25 tariff [20] - 644:8, 646:2, 646:23, 648:8, 652:19, 653:1, 653:12, 654:13, 736:14,

737:24, 741:2, 742:14, 742:17, 745:11, 746:13, 747:3, 747:16, 747:22, 748:17, 748:19 Tariff [2] - 740:1, 749:7 tariffs [5] - 647:22, 719:17, 735:5, 736:4 tax [4] - 637:1, 637:4, 637:7, 637:21 team [4] - 588:14, 588:15, 588:17, 727:21 tease [1] - 683:10 teased [2] - 682:19, 683:25 technical [3] - 602:17, 658:6, 659:21 technology [3] -607:2, 666:16, 697:12 templates [1] - 612:19 tend [1] - 640:13 tender [2] - 706:4, 718:21 term [2] - 590:21, 615:11 terminate [1] - 748:6 termination [1] -748:23 terminology [2] -613:8, 700:22 terms [10] - 590:14, 590:17, 607:10, 627:7, 627:21, 629:18, 731:5, 732:11, 748:10 territory [4] - 600:20, 696:12, 740:21, 746:23 test [23] - 630:4, 630:11, 631:21, 631:24, 634:16, 643:23, 662:5, 662:7, 671:24, 675:19, 676:17, 678:8, 679:11, 685:5, 685:8, 685:10, 685:13, 685:23, 685:24, 689:1, 689:2, 689:4, 723:2

test-year [3] - 678:8,

testified [22] - 577:4,

679:11, 723:2

584:7, 596:20, 614:10, 621:9, 627:7, 633:16, 635:19, 638:17, 646:1, 656:4, 660:20, 661:17, 663:4, 673:18, 705:15, 706:12, 709:22, 711:20, 718:4, 729:20, 742:4 testify [2] - 659:3, 669:5 testimony [139] -578:7, 578:10, 578:16, 580:6, 589:20, 589:23, 589:25, 590:24, 594:8, 599:6, 609:6, 609:8, 614:23, 615:1, 615:3, 615:5, 615:10, 615:12, 615:15, 615:19, 615:25, 616:11, 616:13, 616:16, 616:24, 617:9, 617:14, 617:15, 618:3, 618:25, 619:25, 621:20, 621:23, 622:1, 626:7, 626:9, 626:17, 627:12, 627:24, 630:3, 633:8, 633:14, 634:2, 634:11, 636:1, 636:3, 636:24, 637:19, 637:21, 638:25, 639:1, 639:11, 640:20, 644:13, 645:9, 645:13, 652:6, 654:1, 654:4, 654:10, 654:22, 657:25, 660:21, 663:15, 663:16, 663:22, 664:3, 664:11, 664:16, 665:9, 665:13, 665:15, 667:3, 667:7, 667:17, 667:21, 671:3, 672:19, 674:6, 674:7, 674:12, 674:15, 674:19, 674:24, 675:2, 675:5, 676:9, 678:5, 678:23, 683:9, 684:23, 685:14,

686:23, 689:10, 690:6, 690:12, 690:17, 690:18, 695:11, 695:21, 700:24, 705:24, 706:2, 710:2, 710:7, 710:9, 711:2, 712:2, 718:11, 718:14, 718:16, 718:19, 719:9, 719:17, 720:9, 720:17, 722:19, 722:25, 724:1, 724:2, 724:3, 725:2, 726:24, 728:6, 729:24, 729:25, 730:2, 730:10, 730:14, 732:1, 732:7, 732:9, 734:22. 734:24. 735:4. 737:20. 743:21 testing [1] - 698:6 THE [241] - 569:16, 577:7, 578:3, 579:16, 582:16, 583:10, 583:23, 585:24, 587:1, 587:10, 587:14, 587:19, 588:2, 588:7, 588:15, 588:21, 589:5, 589:15, 589:22, 590:6, 590:12, 591:2, 591:16, 592:22, 593:4, 594:5, 594:12, 594:16, 594:20, 595:12, 596:6, 596:8, 596:11, 596:15, 596:25, 597:18, 597:21, 598:7, 598:10, 599:10, 600:18, 601:16, 602:10, 603:1, 603:7, 603:15, 603:19, 604:2, 604:7, 604:22, 605:3, 605:7, 605:10, 605:13, 605:25, 606:7, 606:12, 606:16, 607:8, 607:14, 607:16, 613:16, 614:6, 616:14, 616:19, 616:23, 617:15, 618:1, 618:7,

618:12, 618:17, 620:8, 620:14, 620:18, 622:9, 622:19, 622:22, 623:9, 623:20, 624:6, 624:17, 624:21, 624:24, 625:3, 625:9, 625:15, 625:20, 625:25, 626:3, 626:10, 626:16, 626:22, 628:16, 628:19, 629:6, 629:15, 630:10, 630:18, 630:21, 632:6, 632:16, 632:24, 633:10, 633:15. 634:12. 634:17, 636:23, 637:2, 637:5, 639:12, 639:17, 641:4, 641:12, 642:5, 643:20, 643:23, 644:4, 644:10, 645:2, 645:5, 645:24, 646:19, 646:22, 647:1, 647:11, 647:19, 648:13, 649:6, 649:13, 649:23, 656:9, 656:18, 656:22, 657:1, 657:11, 657:17, 658:4, 659:19, 660:8, 661:10, 661:16, 663:9, 664:17, 664:22, 665:4, 665:14, 665:20, 665:24, 666:7, 666:14, 666:21, 666:25, 667:10, 667:22, 668:2, 668:8, 668:12, 668:18, 669:1, 669:6, 669:15, 669:18, 670:4, 670:10, 670:16, 672:1, 672:6, 694:22, 695:15, 695:19, 696:1, 696:5, 696:20, 696:24, 697:4, 697:20, 697:25, 698:5, 698:13, 698:21, 699:2, 699:9, 699:19,

|                         | 1                          | 1                        | T                      | Т                                       |
|-------------------------|----------------------------|--------------------------|------------------------|---|
| 699:22, 699:24,         | 713:17, 713:23,            | 703:20, 774:7            | 649:17, 650:7,         | 661:20, 708:17,                         |
| 700:8, 700:20,          | 714:15, 714:17,            | tool [2] - 595:15,       | 650:12, 650:14,        | 716:2                                   |
| 701:1, 701:7,           | 715:4, 716:23,             | 610:1                    | 650:19, 651:5,         | trying [6] - 603:5,                     |
| 701:15, 702:21,         | 717:17, 727:18,            | tools [1] - 595:5        | 651:18, 651:21,        | 617:6, 617:10,                          |
| 702:24, 703:4,          | 728:15, 741:19,            | top [7] - 605:13,        | 651:23, 652:2,         | 619:6, 688:4, 724:20                    |
| 709:14, 713:14,         | 746:14, 749:8              | 632:17, 670:4,           | 652:5, 652:11,         | turn [7] - 578:8,                       |
| 714:17, 715:7,          | three-and-a-half [3] -     | 671:7, 678:11,           | 652:21, 653:23,        | 581:22, 686:19,                         |
| 717:12, 717:21,         | 609:15, 690:19,            | 678:14, 729:1            | 654:12, 680:17,        | 691:7, 711:1, 712:1,                    |
| 719:13, 719:22,         | 691:2                      | topic [5] - 586:14,      | 688:21, 689:11,        | 732:1                                   |
| 725:25, 726:20,         | three-page [1] - 749:8     | 603:8, 655:3, 655:7,     | 689:15, 689:22,        | turned [1] - 600:8                      |
| 726:23, 727:19,         | three-year [4] -           | 740:5                    | 690:2, 691:6, 692:3,   | turning [2] - 578:15,                   |
| 728:14, 728:19,         | 632:22, 713:17,            | topics [5] - 652:5,      | 699:12, 700:6,         | 720:15                                  |
| 728:25, 729:10,         | 713:23, 716:23             | 655:1, 680:18,           | 702:1, 710:23,         | twice [1] - 695:2                       |
| 730:21, 731:9,          | threshold [1] - 592:15     | 684:10, 743:22           | 712:14, 712:15,        | two [21] - 575:19,                      |
| 731:14, 732:3,          | thresholds [1] - 604:1     | total [14] - 596:9,      | 712:18, 714:12,        | 582:10, 611:9,                          |
| 732:6, 732:17,          | throughout [11] -          | 605:10, 605:20,          | 716:22, 744:1,         | 613:22, 626:23,                         |
| 732:23, 733:3,          | 588:21, 599:6,             | 606:23, 635:23,          | 744:2, 744:5, 748:4,   | 629:15, 629:17,                         |
| 733:10, 733:13,         | 623:22, 624:7,             | 672:21, 672:25,          | 748:19, 748:21,        | 631:2, 650:23,                          |
| 733:21, 734:2,          | 624:9, 627:10,             | 675:18, 684:19,          | 748:24                 | 650:25, 651:12,                         |
| 734:10, 736:10,         | 630:2, 635:11,             | 702:7, 702:13,           | transmit [1] - 695:22  | 655:1, 655:18,                          |
| 742:10, 742:18,         | 635:20, 694:8,             | 702:16, 712:15           | transmits [1] - 695:25 | 673:7, 686:24,                          |
| 743:2, 743:9,           | 700:24                     | totality [2] - 645:18,   | transparency [18] -    | 692:24, 698:19,                         |
| 743:14, 743:18,         | <b>Thus</b> [1] - 615:17   | 646:8                    | 626:9, 626:12,         | 700:25, 716:16,                         |
| 743:23, 744:9,          | tied [1] - 660:15          | touched [1] - 680:24     | 626:15, 628:14,        | 723:15, 724:25                          |
| 744:14, 744:18,         | time-of-day [2] -          | toward [1] - 714:10      | 628:16, 629:2,         | <b>type</b> [13] - 603:19,              |
| 745:1, 745:13,          | 721:6, 723:15              | towards [3] - 595:13,    | 629:11, 629:12,        | 603:23, 647:21,                         |
| 745:20, 746:2,          | time-of-use [2] -          | 607:11, 661:13           | 629:13, 658:3,         | 652:18, 653:2,                          |
| 746:6, 746:19,          | 669:20, 725:6              | track [1] - 605:25       | 658:6, 660:6,          | 660:14, 660:16,                         |
| 747:4, 747:8            | time-sensitive [1] -       | tracked [1] - 587:20     | 660:17, 660:18,        | 661:14, 683:3,                          |
| the-meter [1] - 726:4   | 604:14                     | traditionally [1] -      | 661:4, 661:6, 662:3    | 683:15, 731:12,                         |
| theirs [1] - 598:3      | timeline [1] - 599:10      | 656:21                   | transparent [8] -      | 746:25                                  |
| themselves [2] -        | timelines [1] - 585:23     | training [10] - 591:17,  | 606:15, 607:3,         | types [2] - 591:7,                      |
| 642:1, 685:17           | timely [1] - 604:13        | 592:24, 593:1,           | 607:6, 628:11,         | 708:1                                   |
| thereof [1] - 707:21    | <b>Tipton</b> [7] - 573:9, | 594:18, 595:8,           | 629:18, 634:10,        | <b>typewriting</b> [1] - 774:9          |
| thermostats [1] -       | 577:10, 703:23,            | 600:15, 608:4,           | 650:11, 660:25         | typewritten [1] -                       |
| 669:24                  | 717:23, 718:6, 729:5       | 612:7, 612:10, 613:1     | treated [3] - 602:7,   | 774:11                                  |
| they've [3] - 685:12,   | <b>TIPTON</b> [8] - 571:2, | transacted [1] - 609:1   | 656:15, 720:10         | typically [4] - 595:24,                 |
| 698:24, 706:23          | 577:13, 717:24,            | transcript [4] - 581:23, | treating [2] - 723:16, | 598:14, 613:3,                          |
| thinking [3] - 654:21,  | 718:7, 718:9,              | 738:15, 751:9,           | 723:18                 | 683:23                                  |
| 682:16, 730:22          | 718:21, 718:25,            | 774:12                   | treats [1] - 669:7     |   |
| third [6] - 593:21,     | 729:6                      | transfer [1] - 597:16    | triggered [1] - 599:11 | U                                       |
| 602:9, 686:15,          | title [2] - 577:20,        | transferability [1] -    | trouble [1] - 625:5    |   |
| 714:1, 714:9, 716:25    | 577:22                     | 650:6                    | truck [7] - 600:4,     | ubiquitous [1] -                        |
| third-party [1] - 602:9 | today [15] - 577:12,       | transition [2] - 593:22, | 695:1, 696:6,          | 696:11                                  |
| THOMAS [1] - 570:15     | 615:25, 622:1,             | 596:1                    | 696:17, 696:19,        | <b>UI</b> [2] - 659:15, 659:22          |
| thoughts [2] - 743:20,  | 646:21, 664:3,             | translation [1] -        | 696:22, 699:25         | UlPlanner [25] - 626:9,                 |
| 744:16                  | 666:11, 675:4,             | 660:21                   | true [6] - 579:21,     | 626:13, 626:14,                         |
| thousand [1] - 605:23   | 693:25, 704:2,             | transmission [59] -      | 579:24, 581:3,         | 626:25, 627:10,                         |
| thread [1] - 595:17     | 711:24, 730:7,             | 644:20, 644:22,          | 587:22, 666:16,        | 627:17, 627:20,                         |
| three [27] - 587:10,    | 737:21, 739:8,             | 645:1, 645:6,            | 675:5                  | 627:24, 629:18,                         |
| 587:25, 588:16,         | 739:18, 743:11             | 645:11, 645:17,          | true-up [1] - 587:22   | 631:15, 631:17,                         |
| 604:16, 605:7,          | together [3] - 603:10,     | 645:22, 646:7,           | truly [1] - 634:3      | 634:9, 655:2,                           |
| 609:15, 615:4,          | 608:18, 660:15             | 646:13, 646:16,          | trusting [1] - 630:1   | 657:23, 657:25,                         |
| 622:15, 632:20,         | tomorrow [1] - 739:9       | 647:3, 647:10,           | try [10] - 581:21,     | 658:1, 658:9,                           |
| 632:22, 684:22,         | took [7] - 600:25,         | 647:13, 648:11,          | 585:14, 598:22,        | 659:16, 659:17,                         |
| 690:19, 691:2,          | 609:19, 612:14,            | 648:21, 649:12,          | 601:17, 602:25,        | 659:21, 660:16,                         |
| 692:11, 708:2,          | 676:16, 694:1,             | 649:14, 649:16,          | 607:8, 661:6,          | , |
|                         |                            |                          |                        |   |
|                         |                            |                          |                        |   |

| 660:25, 661:3, 662:3        |
|-----------------------------|
| UIPlanner-type [1] -        |
| 660:16                      |
| <b>unable</b> [4] - 603:25, |
| 604:5, 628:23, 629:4        |
| unanimous [1] -             |
| 674:11                      |
| unbiased [1] - 733:24       |
| uncertainty [2] -           |
| 650:10, 651:4               |
| unchanged [2] -             |
| 694:13, 694:16              |
| uncollectibles [9] -        |
|                             |
| 684:10, 684:16,             |
| 684:20, 685:25,             |
| 686:2, 686:5, 686:7,        |
| 686:13, 686:16              |
| under [19] - 592:12,        |
| 646:23, 646:24,             |
| 649:10, 652:7,              |
| 653:11, 653:24,             |
| 668:21, 671:24,             |
| 682:12, 691:16,             |
| 693:21, 694:13,             |
| 713:25, 721:8,              |
| 735:17, 742:17,             |
| 748:9, 774:10               |
| undergrounding [12] -       |
| 668:17, 668:21,             |
| 670:7, 670:8,               |
| 670:11, 670:25,             |
| 672:4, 672:13,              |
| 672:16, 672:19,             |
| 672:23, 673:3               |
| underlying [3] -            |
|                             |
| 658:14, 658:24,             |
| 660:18                      |
| undersigned [1] -           |
| 774:2                       |
| understandably [1] -        |
| 603:21                      |
| undertake [2] -             |
| 671:17, 731:8               |
| undertaking [2] -           |
| 609:17, 671:10              |
| unilateral [1] - 648:8      |
| unique [6] - 601:13,        |
| 601:18, 611:15,             |
| 648:24, 694:23,             |
| 695:3                       |
| unit [1] - 740:15           |
| University [3] -            |
| 577:25, 584:21              |
|                             |
| unless [3] - 598:15,        |
| 614:1, 622:12               |
| unpaid [1] - 597:14         |
| unreasonable [1] -          |
| 1                           |

```
714:21
unreliability [1] -
 642:23
unsettled [3] - 630:16,
 630:18. 739:17
unsustainable [1] -
 580:13
up [59] - 576:15,
 580:6, 587:22,
 589:25, 592:7,
 592:13, 593:1,
 593:12, 594:17,
 595:20, 597:23,
 597:25, 607:22,
 610:1, 610:2,
 610:19, 612:6,
 613:4, 616:23,
 617:6, 627:4,
 629:22, 629:25,
 630:17, 630:19,
 631:2, 634:25,
 651:12, 653:20,
 654:21, 655:13,
 660:13, 666:18,
 671:4, 677:15,
 677:22, 680:5,
 688:5, 690:5,
 692:24, 698:18,
 701:9, 701:13,
 713:15, 714:23,
 719:15, 720:6,
 721:4, 721:14,
 722:13, 722:24,
 723:12, 724:24,
 733:3, 736:8,
 738:10, 746:13,
 747:25, 750:3
update [3] - 714:13,
 717:13, 744:4
updated [2] - 613:11,
 700:15
updates [1] - 730:3
updating [2] - 700:5,
 744:4
upgrade [2] - 658:13,
 667:1
upgrades [1] - 731:5
uploading [1] - 749:9
US[1] - 570:18
usage [12] - 591:19,
 592:7, 592:13,
 592:15, 592:17,
 598:1, 603:25,
 606:20, 606:23,
 647:9. 675:18.
 679:13
```

useful [8] - 630:7,

| 630:12, 630:13,                                      |
|--|
| 634:4, 636:22,                                       |
| 637:4, 637:18, 672:9                                 |
| users [1] - 625:11                                   |
| uses [3] - 681:10,                                   |
| 694:11 <b>UTILITIES</b> [2] - 569:2,                 |
| 569:16   |
| utilities [14] - 593:5,                              |
| 611:9, 614:21,                                       |
| 639:19, 640:1,                                       |
| 640:6, 640:15,                                       |
| 642:15, 659:22,                                      |
| 659:24, 667:23,                                      |
| 731:3, 731:7, 733:16                                 |
| <b>Utilities</b> [19] <b>-</b> 575:2, 581:18, 586:1, |
| 587:6, 587:9, 589:3,                                 |
| 589:7, 589:13,                                       |
| 591:11, 596:4,                                       |
| 603:2, 604:19,                                       |
| 627:15, 629:2,                                       |
| 670:14, 705:2,                                       |
| 745:19, 751:4  |
| utility [40] - 584:22,                               |
| 584:24, 587:22,                                      |
| 597:1, 606:25,                                       |
| 607:1, 607:7, 625:6,                                 |
| 632:4, 632:14,<br>634:7, 641:15,                     |
| 641:18, 641:20,                                      |
| 642:8, 646:18,                                       |
| 659:23, 664:23,                                      |
| 666:2, 668:7,  |
| 670:13, 674:5,                                       |
| 701:12, 706:22,                                      |
| 716:21, 730:16,                                      |
| 731:13, 732:14,<br>735:1, 735:11,                    |
| 735:13, 735:17,                                      |
| 735:20, 735:24,                                      |
| 736:1, 736:14,                                       |
| 736:18, 737:8,                                       |
| 737:11, 740:19                                       |
| utility's [2] - 696:10,                              |
| 740:21   |
| utilization [1] - 675:16                             |
| utilize [1] - 661:11                                 |
| utilized [1] - 627:3                                 |
| utilizes [1] - 658:23                                |
| utilizing [3] - 665:11,<br>725:5, 746:5              |
| 120.0, 140.0   |
| V  |

value [3] - 612:13,

Value [2] - 642:13, 642:15 valued [1] - 648:19 VAN [5] - 570:12, 705:5, 705:19, 706:4, 709:12 **Van** [5] - 573:10, 703:22, 705:4, 705:17, 709:11 **variability** [1] - 694:7 variations [1] - 679:14 Varied [1] - 569:11 variety [2] - 681:9, 681:10 various [3] - 623:1, 624:2, 661:18 vary [2] - 588:21, 588:23 verbals [1] - 596:3 verbiage [1] - 612:21 verify [1] - 751:6 versus [4] - 588:20, 589:3, 714:6, 721:22 via [1] - 571:22 video [1] - 593:17 videos [2] - 593:11, 595:9 view [4] - 575:23, 680:21, 687:12, 731.6 viewed [1] - 627:8 vintage [1] - 659:14 vis-à-vis [1] - 679:7 Vista [1] - 584:20 visually [1] - 729:1 Vognsen [18] - 573:7, 575:16, 613:20, 613:22, 655:13, 680:24, 684:2, 704:3, 724:1, 737:24, 739:21, 739:24, 740:23, 742:7, 742:12, 747:15, 749:18, 749:25 VOGNSEN [1] - 742:1 Vognsen's [3] -722:19, 722:24, 723:25 voice [8] - 585:3, 594:24, 595:6, 595:19, 608:15,

608:16, 608:21,

volatility [2] - 677:25,

608:24

655:10, 691:11

694:4

voltage [1] - 748:4

VOLUME [1] - 569:7

volume [1] - 595:24

vote [2] - 727:14,

750:23

votes [1] - 750:24

#### W

wage [1] - 594:6 Wagner [13] - 575:12, 575:15, 620:3, 634:6, 643:21, 656:10, 664:7, 669:12, 699:22, 742:11, 750:6, 750:16, 750:25 WAGNER [98] -569:18, 583:3, 583:14, 620:4, 620:10, 620:16, 620:20, 632:1, 632:8, 632:23, 633:5, 639:10, 639:13, 640:20, 641:6, 642:2, 643:13, 644:25, 645:3, 645:21, 646:15, 646:21, 646:23, 647:7, 647:17, 648:9, 649:3, 649:11, 649:19, 651:10, 656:11, 656:20, 656:24, 657:7, 657:13, 657:19, 660:4, 661:7, 661:11, 662:14, 664:8, 664:19, 664:25, 665:8, 665:18, 665:21, 666:2. 666:10. 666:17. 666:22. 667:6, 667:20, 667:24, 668:5, 668:10, 668:14, 668:23, 669:3, 669:9, 694:19, 695:8, 695:16, 695:20, 696:2, 696:15, 696:21, 697:1, 697:13, 697:23, 698:1, 698:7, 698:19, 698:22, 699:3,

|  |                                    |                                   |                                   | 1                                     |
|--|------------------------------------|-----------------------------------|-----------------------------------|---------------------------------------|
| 699:16, 699:20,  | West [1] - 570:23                  | 709:20, 711:3,                    | 626:10, 626:16,                   | 726:23, 727:19,                       |
| 699:23, 700:3,   | Westown [1] - 570:22               | 712:3, 717:19,                    | 626:22, 628:16,                   | 728:14, 728:19,                       |
| 700:17, 700:21,  | whichever [1] - 714:10             | 717:22, 718:2,                    | 628:19, 629:6,                    | 728:25, 729:10,                       |
| 713:9, 714:15,   | whole [11] - 601:21,               | 729:9, 729:13,                    | 629:15, 630:10,                   | 730:21, 731:9,                        |
| 714:25, 715:14,  | 622:13, 622:17,                    | 729:17, 737:18,                   | 630:18, 630:21,                   | 731:14, 732:3,                        |
| 717:6, 717:18,   | 622:20, 623:7,                     | 742:2, 750:2                      | 632:6, 632:16,                    | 732:6, 732:17,                        |
| 742:12, 742:24,  | 631:11, 645:15,                    | Witness [9] - 613:17,             | 632:24, 633:10,                   | 732:23, 733:3,                        |
| 743:5, 743:10,   | 648:22, 687:25,                    | 627:6, 635:19,                    | 633:15, 634:12,                   | 733:10, 733:13,                       |
| 743:15, 743:19,  | 688:8, 724:14                      | 637:20, 638:9,                    | 634:17, 636:23,                   | 733:21, 734:2,                        |
| 744:7, 744:11,   | <b>WILLIAMS</b> [1] - 571:8        | 660:5, 671:2,                     | 637:2, 637:5,                     | 734:10, 736:10,                       |
| 744:16, 744:19,  | willing [1] - 633:12               | 689:16, 729:11                    | 639:12, 639:17,                   | 742:10, 742:18,                       |
| 750:17, 751:1  | wind [1] - 602:5                   | WITNESS [243] -                   | 641:4, 641:12,                    | 743:2, 743:9,                         |
| Wagner's [2] - 651:12,                                   | Winick [2] - 570:12,               | 573:2, 574:2, 577:7,              | 642:5, 643:20,                    | 743:14, 743:18,                       |
| 652:17   | 571:2                              | 578:3, 579:16,                    | 643:23, 644:4,                    | 743:23, 744:9,                        |
| wait [6] - 586:25,                                       | winter [8] - 603:13,               | 582:16, 583:10,                   | 644:10, 645:2,                    | 744:14, 744:18,                       |
| 588:20, 589:1,   | 612:5, 721:10,                     | 583:23, 585:24,                   | 645:5, 645:24,                    | 745:1, 745:13,                        |
| 589:4, 613:20,   | 721:13, 721:15,                    | 587:1, 587:10,                    | 646:19, 646:22,                   | 745:20, 746:2,                        |
| 710:10   | 721:25, 722:6, 722:7               | 587:14, 587:19,                   | 647:1, 647:11,                    | 746:6, 746:19,                        |
| <b>walk</b> [6] - 576:2,                                 | wintertime [1] -                   | 588:2, 588:7,                     | 647:19, 648:13,                   | 747:4, 747:8                          |
| 603:8, 615:9, 696:2,                                     | 603:22                             | 588:15, 588:21,                   | 649:6, 649:13,                    | witness's [1] - 730:10                |
| 698:7, 747:20  | wires [1] - 731:3                  | 589:5, 589:15,                    | 649:23, 656:9,                    | witnesses [7] -                       |
| walked [1] - 658:9                                       | Wisconsin [3] - 570:5,             | 589:22, 590:6,                    | 656:18, 656:22,                   | 613:19, 625:22,                       |
| Walmart [1] - 571:11                                     | 570:6, 662:8                       | 590:12, 591:2,                    | 657:1, 657:11,                    | 640:19, 669:20,                       |
| <b>Walnut</b> [2] - 570:16,                              | wise [1] - 682:7                   | 591:16, 592:22,                   | 657:17, 658:4,                    | 700:10, 711:6,                        |
| 571:20   | wish [5] - 576:7,                  | 593:4, 594:5,                     | 659:19, 660:8,                    | 739:22                                |
| Ward [1] - 570:21  | 582:17, 613:19,                    | 594:12, 594:16,                   | 661:10, 661:16,                   | wonder [1] - 723:22                   |
| Washington [1] -   | 616:6, 692:21                      | 594:20, 595:12,                   | 663:9, 664:17,                    | WOODSMALL[1] -                        |
| 570:20   | wishes [1] - 576:15                | 596:6, 596:8,                     | 664:22, 665:4,                    | 571:11                                |
| Water [1] - 582:2  | withdraw [4] - 639:9,              | 596:11, 596:15,                   | 665:14, 665:20,                   | word [2] - 663:23,                    |
| waterfall [1] - 719:2                                    | 674:23, 718:24,                    | 596:25, 597:18,                   | 665:24, 666:7,<br>666:14, 666:21, | 663:24                                |
| waters [1] - 692:15                                      | 732:19                             | 597:21, 598:7,                    | 666:25, 667:10,                   | words [1] - 676:4                     |
| <b>ways</b> [3] - 612:15,                                | withdrawal [1] -                   | 598:10, 599:2,<br>599:10, 600:18, | 667:22, 668:2,                    | worker [1] - 642:12                   |
| 719:13, 719:14   | 615:22                             | 601:16, 602:10,                   | 668:8, 668:12,                    | Workers [1] - 572:2                   |
| weather [1] - 679:14                                     | withdrawing [2] -                  | 603:1, 603:7,                     | 668:18, 669:1,                    | Workpaper [3] -                       |
| <b>web</b> [5] - 595:17,                                 | 615:3, 674:12                      | 603:15, 603:19,                   | 669:6, 669:15,                    | 677:11, 677:16,                       |
| 595:18, 613:12,  | withdrawn [2] - 633:9,             | 604:2, 604:7,                     | 669:18, 670:4,                    | 701:9                                 |
| 627:15, 629:3  | 633:14                             | 604:22, 605:3,                    | 670:10, 670:16,                   | workpaper [1] -                       |
| webinar [2] - 571:22,                                    | witness [54] - 575:9,              | 605:7, 605:10,                    | 672:1, 672:6,                     | 677:16                                |
| 738:10   | 576:5, 576:7, 577:2,               | 605:13, 605:25,                   | 694:22, 695:15,                   | workpapers [1] -                      |
| Wednesday [1] -  | 583:20, 583:22,                    | 606:7, 606:12,                    | 695:19, 696:1,                    | 639:2                                 |
| 569:13   | 583:24, 584:5,                     | 606:16, 607:8,                    | 696:5, 696:20,                    | works [4] - 580:15,                   |
| week [4] - 611:5,  | 614:3, 614:8, 616:3,               | 607:14, 607:16,                   | 696:24, 697:4,                    | 586:4, 594:20,<br>608:14              |
| 738:15, 739:13   | 621:2, 621:4, 621:7,               | 613:16, 614:6,                    | 697:20, 697:25,                   |                                       |
| weeks [1] - 623:2  | 633:15, 638:7,                     | 616:14, 616:19,                   | 698:5, 698:13,                    | worth [1] - 692:2<br>WPL [4] - 660:1, |
| weigh [1] - 668:20                                       | 638:11, 638:12,                    | 616:23, 617:15,                   | 698:21, 699:2,                    | 660:3, 694:10,                        |
| weight [6] - 583:11,                                     | 638:15, 652:8,                     | 618:1, 618:7,                     | 699:9, 699:19,                    | 694:11                                |
| 583:12, 640:13,  | 653:18, 654:17,                    | 618:12, 618:17,                   | 699:22, 699:24,                   | write [1] - 586:7                     |
| 641:9, 682:4, 683:7                                      | 654:19, 656:2,                     | 620:8, 620:14,                    | 700:8, 700:20,                    | written [1] - 660:21                  |
| <b>weighted</b> [2] - 675:25, 689:1                      | 656:13, 662:16,                    | 620:18, 622:9,                    | 701:1, 701:7,                     | Wynkoop [1] - 571:9                   |
|  | 662:18, 662:20,                    | 622:19, 622:22,                   | 701:15, 702:21,                   | TTYTINOOP[1] - 37 1.8                 |
| weighting [2] -  | 663:2, 673:9,<br>673:11, 673:13    | 623:9, 623:20,                    | 702:24, 703:4,                    | Х                                     |
| 682:17, 687:16   | 673:11, 673:13,<br>673:16, 692:22, | 624:6, 624:17,                    | 709:14, 713:14,                   | ^                                     |
| <b>welcome</b> [1] - 594:25<br><b>Wendi</b> [3] - 573:5, | 700:20, 703:5,                     | 624:21, 624:24,                   | 714:17, 715:7,                    |                                       |
| <b>vvendi</b> [3] <b>-</b> 573:5, 584:14                 | 703:16, 703:21,                    | 625:3, 625:9,                     | 717:12, 717:21,                   | X-digit [1] - 659:7                   |
| 1  | 705:10, 705:21,                    | 625:15, 625:20,                   | 719:13, 719:22,                   | <b>XVII</b> [3] - 615:7,              |
| <b>WENDI</b> [2] - 584:4,<br>584:14                      | 706:4, 709:15,                     | 625:25, 626:3,                    | 725:25, 726:20,                   | 674:10, 674:14                        |
| JUT. 1T  |                                    |                                   |                                   |                                       |
|  | 1                                  | <u>į</u>                          | 1                                 | I                                     |

| v                               | 718:25, 727:12,                 |
|---------------------------------|---------------------------------|
| Υ                               | 742:14, 745:6                   |
|                                 | yourself [1] - 654:9            |
| yard [1] - 592:6                | ,                               |
| <b>year</b> [69] - 575:17,      | Z                               |
| 575:22, 587:3,                  |                                 |
| 592:1, 596:15,                  |                                 |
| 611:5, 617:19,                  | <b>zero</b> [3] - 647:8, 647:9, |
| 619:8, 629:25,                  | 695:23                          |
| 630:4, 630:11,                  | <b>zonal</b> [1] - 649:9        |
| 630:13, 631:21,                 |                                 |
| 631:24, 632:22,                 |                                 |
| 634:16, 648:18,                 |                                 |
| 655:6, 658:8,                   |                                 |
| 658:18, 658:19,                 |                                 |
| 662:5, 671:24,                  |                                 |
| 673:7, 675:19,                  |                                 |
| 675:20, 678:8,                  |                                 |
| 679:11, 679:19,                 |                                 |
| 680:1, 685:5, 685:8,            |                                 |
| 685:10, 685:13,                 |                                 |
| 685:23, 685:24,                 |                                 |
| 689:1, 689:2, 694:8,            |                                 |
| 695:2, 698:14,                  |                                 |
| 700:6, 700:16,                  |                                 |
| 708:2, 713:17,                  |                                 |
| 713:23, 714:1,                  |                                 |
| 714:6, 714:9,<br>714:14, 715:3, |                                 |
| 714.14, 715.3, 715:4, 715:10,   |                                 |
| 716:18, 716:20,                 |                                 |
| 716:21, 716:23,                 |                                 |
| 716:25, 717:1,                  |                                 |
| 717:2, 717:9,                   |                                 |
| 717:11, 717:13,                 |                                 |
| 717:16, 723:2,                  |                                 |
| 741:4, 743:6, 743:22            |                                 |
| year's [1] - 689:4              |                                 |
| years [27] - 575:19,            |                                 |
| 584:22, 606:25,                 |                                 |
| 609:13, 609:15,                 |                                 |
| 609:18, 618:4,                  |                                 |
| 632:18, 632:20,                 |                                 |
| 650:23, 650:25,                 |                                 |
| 658:15, 659:13,                 |                                 |
| 660:3, 662:7,                   |                                 |
| 676:11, 676:17,                 |                                 |
| 692:11, 714:15,                 |                                 |
| 714:17, 715:2,                  |                                 |
| 715:4, 715:5,                   |                                 |
| 715:12, 727:18,                 |                                 |
| 728:23, 744:17                  |                                 |
| yesterday [12] -                |                                 |
| 575:12, 575:13,                 |                                 |
| 585:12, 645:9,                  |                                 |
| 655:3, 680:24,                  |                                 |
| 697:11, 700:14,                 |                                 |
|                                 |                                 |
| L                               | 1                               |

PETERSEN COURT REPORTERS
P.O. Box 71484
Clive, IA 50325
(515) 243-6596