

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

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In the Matter of the Filing :  
by Ohio Edison Company, :  
The Cleveland Electric :  
Illuminating Company and : Case No. 16-481-EL-UNC  
The Toledo Edison Company :  
of a Grid Modernization :  
Business Plan. :

In the Matter of the Filing :  
by Ohio Edison Company, :  
The Cleveland Electric :  
Illuminating Company and : Case No. 17-2436-EL-UNC  
The Toledo Edison Company :  
Application for Approval of :  
a Distribution Platform :  
Modernization Plan. :

In the Matter of the :  
Application of Ohio Edison :  
Company, The Cleveland :  
Electric Illuminating :  
Company and The Toledo : Case No. 18-1604-EL-UNC  
Edison Company to Implement :  
Matters Relating to the Tax :  
Cuts and Jobs Act of 2017. :

In the Matter of the :  
Application of Ohio Edison :  
Company, The Cleveland :  
Electric Illuminating :  
Company and The Toledo : Case No. 18-1656-EL-ATA  
Edison Company for Approval :  
of a Tariff Change. :

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PROCEEDINGS - VOLUME II - PUBLIC

before Mr. Gregory Price and Ms. Megan J. Addison,  
Attorney Examiners, at the Public Utilities  
Commission of Ohio, 180 East Broad Street, Room 11-A,  
Columbus, Ohio, called at 9:00 a.m. on Wednesday,  
February 6, 2019.

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Wednesday Morning Session,  
February 6, 2019.

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EXAMINER ADDISON: Let's go ahead and go  
on the record.

This is a continuation of the hearing for  
Case No. 16-481-EL-UNC, et al. We will dispense with  
taking appearances this morning.

Mr. Kelter, you may call your witness.

MR. KELTER: Mr. Curt Volkmann, please  
take the stand.

EXAMINER ADDISON: Good morning.

MR. KELTER: Swear you in.

EXAMINER ADDISON: Thank you very much.  
Please raise your right hand.

(Witness sworn.)

EXAMINER ADDISON: Please be seated.

EXAMINER PRICE: If you could turn on  
your microphone.

- - -

CURT VOLKMANN

being first duly sworn, as prescribed by law, was  
examined and testified as follows:

DIRECT EXAMINATION

By Mr. Kelter:



1           Q.    Mr. Volkmann, could you please state your  
2   name and business address for the record.

3           A.    My name is Curt Volkmann. My business  
4   address is 736 North Western Avenue #115 in Lake  
5   Forest, Illinois 60045.

6           Q.    And, Mr. Volkmann, you should have  
7   confidential and public testimony before you. I'm  
8   going to walk you through that. Do you have before  
9   you the Direct Testimony of Curt Volkmann on  
10  behalf of the Environmental Law & Policy Center,  
11  Natural Resources Defense Council, and Ohio  
12  Environmental Council, the Public Version?

13          A.    I do.

14          Q.    And do you have with that public version,  
15  Exhibit CV-1, CV-2, and CV-3?

16          A.    Yes.

17               MR. KELTER: Your Honors, we are going to  
18  mark those Exhibit ELPC 32.

19          Q.    And, Mr. Volkmann, do you have before you  
20  your confidential testimony and Confidential  
21  Exhibit CV-4?

22          A.    Yes.

23               MR. KELTER: Your Honors, we're going to  
24  mark that ELPC 33 Confidential.

25               EXAMINER ADDISON: They will be so

1 marked.

2 (EXHIBITS MARKED FOR IDENTIFICATION.)

3 Q. Mr. Volkmann, was this testimony prepared  
4 by you or under your direction?

5 A. Yes.

6 Q. And if I asked you the questions in your  
7 testimony, the same questions today, would your  
8 answers be the same?

9 A. Yes.

10 Q. Are there any corrections that you want  
11 to make?

12 A. Yes. One on page 1, at line 7, that  
13 sentence should read "I am submitting this testimony  
14 on behalf of the Environmental Law & Policy Center,  
15 the Natural Resources Defense Council, and the Ohio  
16 Environmental Council."

17 MR. KELTER: And just for the record,  
18 your Honor, that's already how it was marked on the  
19 cover of the testimony.

20 EXAMINER ADDISON: Thank you.

21 Q. Any other corrections, Mr. Volkmann?

22 A. No.

23 MR. KELTER: Mr. Volkmann is tendered for  
24 cross-examination.

25 EXAMINER ADDISON: Thank you very much.

1 Ms. Whitfield, any questions?

2 MS. WHITFIELD: No questions, your Honor.

3 EXAMINER ADDISON: Ms. Bojko.

4 MS. BOJKO: No, thank you.

5 EXAMINER ADDISON: Mr. Royer.

6 MR. ROYER: No questions.

7 EXAMINER ADDISON: OCC.

8 MS. O'BRIEN: No questions, your Honor.

9 EXAMINER ADDISON: IGS.

10 MS. ALLEN: I believe --

11 MR. LANG: I think the Companies are  
12 ready to go first, if we can do that.

13 EXAMINER ADDISON: Thank you very much.  
14 Of course, Mr. Lang. Please proceed, Mr. Lang.

15 MR. LANG: Thank you.

16 - - -

17 CROSS-EXAMINATION

18 By Mr. Lang:

19 Q. And good morning, Mr. Volkmann.

20 A. Good morning.

21 Q. I wanted to start off easy, put some  
22 dates on work experience. You worked for Pacific Gas  
23 & Electric between 1984 and 1993, correct?

24 A. Correct, yes.

25 Q. And you were also licensed as a

1 professional engineer in California around that time  
2 from 1987 to 1995, correct?

3 A. Correct.

4 Q. And then you let your license lapse in  
5 1995.

6 A. Correct.

7 Q. And then you also worked for Accenture  
8 from late 1994 through 2013, correct?

9 A. That's correct, yes.

10 Q. And then after that, you were employed by  
11 the Environmental Law & Policy Center from 2013 until  
12 June of 2015?

13 A. Correct.

14 Q. And you've been in your own consulting  
15 practice since then, correct?

16 A. Correct.

17 Q. Now, you are not a licensed professional  
18 engineer in Ohio, correct?

19 A. Correct.

20 Q. If I can ask you to turn to page 6 of  
21 your testimony. At the top of page 6, lines 1  
22 through 11, you have a definition of distribution  
23 automation that's taken from the Companies' Grid  
24 Modernization Business Plan. Do you see that  
25 testimony?

1           A.    I do, yeah.

2           Q.    And is it true that when you refer to  
3 distribution automation, or DA, elsewhere in your  
4 testimony, you're relying on this definition of DA?

5           A.    That's correct.

6           Q.    Now, your only prior experience with DA  
7 is that you've evaluated the DA that was proposed by  
8 Southern California Edison in 2017, would be one;  
9 also Duke North Carolina's recent PowerForward plan;  
10 and, third, Dominion Virginia's recent grid  
11 transformation plan, correct?

12          A.    Those are experiences I have, but I would  
13 also point out that I've been working in the industry  
14 for over 30 years, worked with dozens of distribution  
15 companies around the world, that have had various  
16 forms of distribution automation over the years, so I  
17 am familiar with the technologies and their impacts  
18 on reliability beyond the cases you cited.

19          Q.    Those three cases are the only cases  
20 where you've evaluated DA, correct?

21          A.    Those are cases where I've evaluated  
22 proposed grid modernization investments that include  
23 some form of distribution automation.

24          Q.    Now, you have not had firsthand  
25 experience developing or deploying a DA system,

1 correct?

2 A. That's correct. But again, my opinions,  
3 my conclusions in my testimony are based on my  
4 30-plus years of experience in the industry and  
5 familiarity with distribution systems at multiple  
6 utilities, and I don't believe direct experience  
7 implementing distribution automation is necessary for  
8 that.

9 MR. LANG: Your Honor, I would move to  
10 strike his response starting with "But."

11 MR. KELTER: Your Honor, he answered the  
12 question, and then he explained.

13 EXAMINER ADDISON: Thank you, Mr. Kelter.  
14 I will be denying the motion to strike. I believe  
15 Mr. Volkmann deserves the latitude that we've  
16 provided to other witnesses. I will instruct the  
17 witness to please listen to Mr. Lang's questions and  
18 answer only his question.

19 Q. (By Mr. Lang) And, Mr. Volkmann, you've  
20 not had firsthand experience deploying an advanced  
21 distribution management system, correct?

22 A. Correct.

23 Q. And in terms of a modern DA system that  
24 has substation equipment, circuit reclosers, and  
25 wireless communications connected to a central

1 system, you have no experience with that type  
2 of deployment, correct?

3 A. That's correct.

4 Q. Now, fair to say that DA deployments by  
5 utilities can differ in how they are designed and how  
6 they -- how the different components communicate and  
7 interact with each other, correct?

8 A. Correct.

9 Q. And there's some DA deployments that rely  
10 on local voltage differences to flip the recloser or  
11 the -- the circuit recloser, correct?

12 A. Correct.

13 Q. And there's some DA deployments that rely  
14 on SCADA or ADMS to open and close the reclosers,  
15 correct?

16 A. Correct.

17 Q. I wanted to ask you on page 17 of your  
18 testimony, at lines 4 through 8, you reference an  
19 Ohio Power Company or AEP Ohio gridSMART initiative.  
20 Is it fair to say that you do not know whether AEP's  
21 Phase 1 of gridSMART included ADMS?

22 A. That's correct, I do not know.

23 Q. Now, you refer to SAIFI, S-A-I-F-I, in  
24 your testimony. And that stands for system average  
25 interruption frequency index, correct?

1           A.     Correct.

2           Q.     That measures interruptions per  
3 customer; is that right?

4           A.     Correct.

5           Q.     Now, in -- in measuring SAIFI,  
6 interruptions of less than 5 minutes are excluded  
7 from that calculation, correct?

8           A.     In Ohio, that's true. Anything less than  
9 5 minutes is excluded from the calculation.

10          Q.     Now, when you refer to major storms in  
11 your testimony, is it correct that you're using  
12 Ohio's definition of major storms?

13          A.     Yes. In fact, if you see Footnote 7 on  
14 page 7, I cite the specific section of the Ohio  
15 Administrative Code that defines major storm events.

16          Q.     So in the rest of your testimony, you're  
17 relying on the definition of major storms in that  
18 Administrative Code provision?

19          A.     I'm relying on the data that the Company  
20 has provided where they had created two datasets, one  
21 during major storms and one excluding major storms;  
22 and I made the assumption that the Companies applied  
23 that same definition in creating the dataset.

24          Q.     Now, you would agree that DA equipment  
25 works during major storms as defined by the State of



1 Ohio, correct?

2 A. DA works during major storms as major  
3 storms are defined by the State of Ohio? Is that  
4 your question?

5 Q. Yes.

6 A. Correct.

7 Q. And now, your opinion in your testimony  
8 that the effectiveness of DA is impaired during major  
9 storms with widespread system damage is based on your  
10 experience as a customer of ComEdison, correct?

11 A. It's more based on my understanding of  
12 distribution systems and how they work and how  
13 distribution automation schemes work and the  
14 dependence on available circuit capacity to switch  
15 additional customers to. And as I state in my  
16 testimony, during a major storm event where there's  
17 significant storm damage, downed lines, it's less --  
18 it's more difficult to reconfigure circuits and  
19 restore customers.

20 Q. Now, you have not seen any studies of the  
21 effectiveness of DA during major storms in the ComEd  
22 territory, correct?

23 A. I have not.

24 Q. And your opinion regarding the  
25 effectiveness of DA during major storms is not based

1 on any studies that you've seen or performed,  
2 correct?

3 A. My opinion of the effectiveness of  
4 distribution automation during major storms again is  
5 based on my 30-plus years of experience working with  
6 distribution companies, my understanding of how  
7 distribution automation schemes work, and my recent  
8 evaluation of other utilities' proposed grid  
9 modernization investments that include distribution  
10 automation and their projected reliability savings,  
11 and my conclusion was the Companies' projection of  
12 reliability improvement during major storms was  
13 significantly higher than anything I've seen.

14 MR. LANG: And, your Honors, I would move  
15 to strike his answer as nonresponsive and ask that  
16 the question be read back and ask that you answer the  
17 question.

18 EXAMINER ADDISON: Absolutely. Can we  
19 have the question read back, and I'll provide  
20 Mr. Kelter an opportunity to respond.

21 (Record read.)

22 EXAMINER ADDISON: Thank you.

23 Mr. Kelter.

24 MR. KELTER: Your Honor, he didn't say  
25 "yes" or "no" at the beginning, but I believe he

1 answered the question.

2 EXAMINER ADDISON: Thank you. I agree.  
3 I believe he was attempting to answer the question,  
4 regardless of if it was in a more narrative fashion.  
5 I will direct the witness to have a "yes" or "no"  
6 answer to the question though, if you could, please.

7 THE WITNESS: Could you repeat the  
8 question one more time, please.

9 EXAMINER ADDISON: Yes, thank you.

10 (Record read.)

11 A. Correct.

12 Q. Now, one of the benefits of DA is that  
13 when there is an outage, it isolates the impact of  
14 that outage to a smaller group of customers, correct?

15 A. Correct.

16 Q. And, for example, if half of the  
17 customers on a circuit suffer only a momentary  
18 interruption because their service is restored  
19 through automatic reclosers, those customers are not  
20 included in SAIFI at all, correct?

21 A. Correct.

22 Q. And another benefit of DA is that the  
23 utility can use reclosers and the automated control  
24 of the system to restore service faster to smaller  
25 sections of the circuits, correct?

1           A.     Correct.

2           Q.     And that would reduce the interruption  
3 duration measured by SAIDI, correct?

4           A.     Yes.

5           Q.     Now, on page 9 of your testimony, you  
6 reference the interruption cost estimate, or ICE,  
7 calculator. Do you see that reference?

8           A.     I do, yes.

9           Q.     And the first time you ever ran the ICE  
10 calculator with actual reliability data provided by a  
11 utility was in preparing your testimony for this  
12 hearing, correct?

13          A.     That's not correct. I -- in my  
14 evaluation of the Duke Carolinas' proposed grid  
15 modernization investment, they also relied on the ICE  
16 calculator, and I was not able to get a full dataset  
17 through discovery but used the ICE calculator to  
18 attempt to model their projected reliability  
19 improvements.

20          Q.     Mr. Volkmann, do you remember having your  
21 deposition taken?

22          A.     I do, yes.

23          Q.     That was by telephonic deposition on  
24 January 22. Do you remember that?

25          A.     Yes.

1 Q. And there was a court reporter present  
2 and you were administered the oath, correct?

3 A. Yes.

4 MR. LANG: Your Honors, if we may  
5 approach with the deposition transcript?

6 EXAMINER ADDISON: You may.

7 Q. Mr. Volkmann, if I could ask you to turn  
8 to page 27 of your deposition transcript. It's  
9 actually starting on page 26. We're discussing the  
10 ICE calculator, and then on page 27, line 3, I'm  
11 going to read, if you can follow along. I have a  
12 question, "Okay. So is this -- so for this testimony  
13 this is the first time you have run the tool, the ICE  
14 tool? Answer: This is the first time I have run the  
15 ICE tool with actual reliability data provided by a  
16 utility," and then, as you had said before, you have  
17 studied the ICE tool in other proceedings. Did I  
18 read that correctly?

19 A. Yes.

20 Q. Now, one of the first variables the ICE  
21 calculator needs is the state in which the utility  
22 operates, correct?

23 A. Correct.

24 Q. Now, on page 7 of your testimony, line 6  
25 through 9, here you're listing some examples of the

1 benefits of grid modernization, and you do agree that  
2 these are benefits of the proposed elements of Grid  
3 Mod I in these proceedings, correct?

4 A. Correct.

5 Q. And there are also other benefits you  
6 have not listed here, correct?

7 A. Correct.

8 Q. If I could ask you to go to page --  
9 starting on page 13 of your testimony, you identify  
10 what you call outlier data, and you remove it from  
11 the calculation of SAIDI and SAIFI. You've done this  
12 one time previously in your evaluation of the  
13 Southern California Edison grid modernization  
14 proposal, correct?

15 A. That's correct.

16 Q. And Southern California Edison's  
17 projected reliability improvement excluded major  
18 storms, correct?

19 A. Correct.

20 Q. Now, you cannot say whether your approach  
21 of identifying outlier data is consistent with other  
22 studies specific to DA and major storms because you  
23 have not seen any other studies about the impact of  
24 DA during major storms, correct?

25 A. That's correct.

1           Q.    But you do expect that customer minutes  
2 interrupted will improve after DA is installed,  
3 correct?

4           A.    To some extent, yes.

5           Q.    Now, on page 17, lines 6 through 8, you  
6 state that AEP Ohio reported an 9.4 percent  
7 improvement in SAIDI from DA and there you're citing  
8 to an attachment to a September 13, 2013, Application  
9 and that's in Footnote 25 of your testimony; is that  
10 right?

11          A.    Correct.

12          Q.    And this SAIDI improvement that you're  
13 referencing was for one year which was the first year  
14 of the DA deployment?

15          A.    Correct. That's my recollection, yes.

16          Q.    And AEP was reporting, in this reference  
17 that you cite, SAIDI and SAIFI excluding major  
18 storms, correct?

19          A.    I don't recall that they reported SAIFI,  
20 but I do recall that the SAIDI improvement excluded  
21 major storms.

22               EXAMINER PRICE: Can we go off the record  
23 one second?

24               MR. LANG: Sure.

25               (Discussion off the record.)

1 EXAMINER PRICE: Let's go back on the  
2 record.

3 Q. And, Mr. Volkmann, just to clarify, I  
4 referenced page 17, lines 6 through 8, earlier about  
5 the AEP Ohio data, and looking at the testimony it's  
6 been pointed out my line references are off. Just so  
7 we're clear for the record, I was referring to page  
8 17, what's now lines 4 through 7. Is it clear?

9 A. Yes.

10 Q. Great. If I were to show you the  
11 Attachment A to the Application that you referenced  
12 in Footnote 25, would it refresh your recollection as  
13 to whether AEP was reporting both SAIDI and SAIFI?

14 A. Perhaps.

15 MR. LANG: May I approach, your Honor?

16 EXAMINER ADDISON: You may.

17 MR. LANG: I have just the one copy, if  
18 you want to see it.

19 Q. (By Mr. Lang) Mr. Volkmann, I've handed  
20 you the application of Ohio Power Company to initiate  
21 Phase 2 of its gridSMART project which includes  
22 Attachment A, page 4, that you reference in your  
23 testimony, does that refresh your recollection that  
24 AEP was reporting both SAIDI and SAIFI excluding  
25 major storms?



1           A.    Yes, I see that now.

2           Q.    And is it -- and AEP's SAIFI, excluding  
3 major storms, improved by 14.1 percent in year one as  
4 a result of the DA deployment; is that correct?

5           A.    In 2012, yes.

6           Q.    And that application that you cite also  
7 states that with regard to those 2012 results, it  
8 says, "These results were realized prior to more  
9 recent efforts to optimize the system with initial  
10 2013 results significantly more favorable than those  
11 experienced in 2012." Do you see that?

12          A.    I see that, yes.

13          Q.    Now, the discussion that you have in your  
14 testimony, looking at the 2005 to 2009 baseline  
15 period and then the 2014 to 2018 study period, with  
16 regard to that baseline period, is it correct that  
17 you do not know how many major storms occurred during  
18 that five-year period?

19          A.    Off the top of my head, I don't know how  
20 many major storms occurred during that five-year  
21 period. I focused in my analysis on the impact of  
22 those events and as measured by customer minutes  
23 interrupted and that's demonstrated in Figure 1 of my  
24 testimony.

25          Q.    And with regard to the 2014 to 2018 study

1 period, you do not know how many major storms  
2 occurred during that four-year period; is that  
3 correct?

4 A. Same answer as before. I focused on the  
5 customer minutes, the impact of the events, not the  
6 number of events.

7 Q. And looking at the April 2005 data,  
8 that's the product of two major storms during that  
9 month, correct?

10 A. Correct.

11 Q. And you do not know whether major storms  
12 of similar intensity occurred during the study  
13 period, correct?

14 A. Can you define the study period?

15 Q. The 2014 to 2018 period.

16 A. The data that the Companies provided  
17 suggest to me that there were no events of that  
18 magnitude in the study period as you've defined it.

19 Q. Mr. Volkmann, if I can have you turn to  
20 your deposition transcript again. And we start on  
21 page 60 of your deposition.

22 A. Okay.

23 Q. You see in the middle of page 60 we're  
24 talking about the April 2005 events, storm events,  
25 and starting on line 20 of page 60, I ask you, "Do

1 you know if any storms with a similar intensity  
2 occurred in the 2014 to 2018 study period?" You  
3 answered "I believe we asked that specific question  
4 in discovery, if my memory serves me correctly, and  
5 my recollection is that we did not get an answer to  
6 the question from the Companies."

7 "My recollection in the response was  
8 something along the lines of 'we don't track that  
9 data' or something of that effect, so I don't know  
10 the answer to that question." Did I read that  
11 correctly?

12 A. You read it correctly, yes.

13 Q. Now, on page 15 of your testimony, lines  
14 6 through 8, you state that you removed two storm  
15 events from the 2015-2016 period because you believed  
16 the favorable reliability was related to mild weather  
17 and not grid mod improvements. And by referring here  
18 in your testimony to "favorable reliability," what  
19 you mean is that the customer minutes interrupted  
20 from these two storms was significantly less than the  
21 customer minutes interrupted resulting from major  
22 storms in other years, correct?

23 A. Correct.

24 Q. It's fair to say you do not know what  
25 impact DA had during the two major storms in the

1 2015-2016 year, correct?

2 A. Correct.

3 Q. Now, at page 15. Check my line numbers.

4 Yep. At page 15, lines 10 -- it's 10 going over to  
5 11, you refer to "comparable levels of major  
6 storms/events," and by "comparable levels" there, you  
7 mean a similar range of customer minutes interrupted  
8 per year, correct?

9 A. Correct.

10 Q. And by removing 2015 through 2016, that  
11 year from the analysis, it became a three-year  
12 average instead of a four-year average, correct?

13 A. That's correct.

14 Q. Now, in your testimony, you are not  
15 offering an opinion concerning what the correct SAIDI  
16 and SAIFI numbers should be in the ICE calculation,  
17 correct?

18 A. That's correct.

19 Q. Now, moving back to page 22 of your  
20 testimony, I think it is. Let me check. It's  
21 actually page 21, Footnote 35. Here you describe  
22 smart thermostat functionality and one of the  
23 features of smart thermostats that you described is  
24 that they use WiFi to connect through the internet,  
25 correct?

1           A.     Correct.

2           Q.     And you would agree there are different  
3 types of smart thermostats and programmable  
4 thermostats, correct?

5           A.     Correct.

6           Q.     In fact, as a ComEd consumer in the  
7 Chicago area, you have a Nest thermostat, correct?

8           A.     I do.

9           Q.     And you do not know whether your Nest  
10 thermostat is controlled by ComEd; is that right?

11          A.     My understanding is that when an event is  
12 called, demand response event is called, that Nest  
13 itself communicates with the thermostats, not ComEd.  
14 That's my understanding.

15          Q.     And the Nest you have is part of ComEd's  
16 energy efficiency portfolio; is that right?

17          A.     Correct.

18          Q.     Now, smart thermostats can function  
19 wholly apart from utility demand response programs,  
20 right?

21          A.     Correct.

22          Q.     And utilities have offered smart  
23 thermostat programs without doing grid modernization,  
24 correct?

25          A.     Correct.

1           Q.    Now, and your understanding is that the  
2   Companies' pilot program included programmable  
3   controllable thermostats that can be controlled by  
4   the utility, correct?

5           A.    That's my understanding, yes.

6           Q.    It's also your understanding that smart  
7   thermostats do not communicate directly with the AMI  
8   meter that is installed at a consumer's location,  
9   correct?

10          A.    They can, but not always.

11          Q.    Your understanding is that the benefit of  
12   smart thermostats are related to reduced energy  
13   consumption and reduced peak demand either at a home  
14   or a business, correct?

15          A.    Correct.

16          Q.    Now, you did not perform an analysis to  
17   determine that the benefit of adding smart  
18   thermostats to the Companies' Grid Mod proposal would  
19   exceed the costs, correct?

20          A.    That's correct.

21          Q.    And any customers of the Companies, who  
22   wants to, can purchase and install a smart thermostat  
23   in their home, correct?

24          A.    Correct.

25          Q.    Because customers have sources for smart

1 thermostats other than the Companies, correct?

2 A. Correct.

3 Q. There's a market for smart thermostats.

4 A. Correct; Home Depot, Lowe's, lots of  
5 places.

6 Q. Now, on page 24 -- looks like it's on  
7 page 23, lines -- starting at line 28, you recommend  
8 that the Companies have a budget for customer  
9 communications and education related to customer  
10 energy benefits of AMI, but you are not recommending  
11 a specific amount or a specific program design,  
12 correct?

13 A. That's correct. My focus was on the  
14 10 percent participation rate that's in the business  
15 case and my recommendation is the necessary  
16 investment to achieve that 10 percent participation  
17 rate.

18 Q. Now, actually going to page 24, this is  
19 where you have a question and answer about the midway  
20 assessment, the assessment that takes place midway  
21 through the Grid Mod I implementation period, and  
22 you -- you do recognize that the Companies will be  
23 reporting performance metrics that are set forth in  
24 Attachment C of the Stipulation, correct?

25 A. Yes, that's correct.

1           Q.   And you also understand that the  
2   Companies will be reporting energy efficiency savings  
3   and peak-demand reduction as part of their separate  
4   portfolio plan, correct?

5           A.   That's correct.   What I'm not clear on is  
6   whether those reports would include the specific  
7   energy savings and peak-demand reductions associated  
8   from Grid Mod I.

9           Q.   Now, the -- the DA, as you understand it  
10   in the Stipulation, will be deployed on 200 circuits,  
11   correct?

12          A.   Correct.

13          Q.   And the total number of circuits in the  
14   Companies' service territories is north of 2,800; is  
15   that your understanding?

16          A.   That's my understanding.

17          Q.   And it's fair to say you do not know how  
18   DA on 200 circuits will affect the reliability across  
19   the Companies' 2,800 or so circuits, correct?

20          A.   That's correct.

21               MR. LANG:   Thank you, Mr. Volkmann.

22               Your Honors, that's all my questions

23               EXAMINER ADDISON:   Thank you, Mr. Lang.

24               OEG, any questions?

25               MR. KURTZ:   I do, thank you, your Honor.



- - -

CROSS-EXAMINATION

By Mr. Kurtz:

Q. Good morning, Mr. Volkmann.

A. Good morning.

Q. I want to ask you about your very first recommendation on page 3, very first sentence. You recommend that the PUCO delay approval of the Stipulation until questions are answered and Staff and stakeholders fully understand the Grid Mod cost/benefit analysis; is that correct?

A. That's correct.

Q. You understand that the Stipulation involves more than just Grid Mod?

A. Yes.

Q. It also involves a refund of hundreds of millions of tax money to consumers?

A. That's my understanding, yes.

Q. And you understand that hundreds of thousands, if not millions, of consumers stand to get money back if the Stipulation is approved?

A. I was not aware of those numbers of customers, but subject to check, I believe you.

Q. Does it bother you that your recommendation would delay the refund to consumers of

1 hundreds of millions of tax savings, hundreds of  
2 millions of dollars of tax savings?

3 A. It's unfortunate, but I believe a short  
4 pause to better understand the cost/benefit analysis  
5 is important.

6 Q. Okay. You say short. In your  
7 recommendation you said until, essentially, you and  
8 your clients fully understand the Grid Mod  
9 cost/benefit analysis, you don't put a time limit in  
10 your testimony, do you?

11 A. I do not. And I also mentioned Staff and  
12 other stakeholders. It's not just me.

13 Q. Okay. How long, how many pages is the  
14 cost/benefit analysis?

15 A. It's an Excel spreadsheet.

16 Q. I don't know. That's why I'm asking you.

17 A. Yeah. So defining it in pages is  
18 difficult. It's in the form of an Excel spreadsheet  
19 with multiple tabs. It's difficult for me to  
20 quantify how big it is.

21 Q. Was it long or short? Would you  
22 characterize it any way?

23 A. The sections in which I focus in my  
24 testimony are specifically related to distribution  
25 automation which is a small portion of the overall

1 cost/benefit analysis and that section is pretty  
2 concise.

3 Q. Okay. How long have you had the  
4 cost/benefit analysis? How long have you been  
5 reviewing it already?

6 A. I believe I received the Excel version in  
7 mid-November is my recollection, mid to late November  
8 perhaps.

9 Q. Is that two and a half months?

10 A. Sounds about right, yes.

11 Q. Well, what if it took a stakeholder, take  
12 any stakeholder -- who are the stakeholders anyway?

13 MR. KELTER: Objection, vague.

14 Q. Well, as you said, "in order for the  
15 stakeholders to fully understand the Grid Mod  
16 cost/benefit analysis," who are the stakeholders you  
17 are referring to?

18 A. I'm referring to the participants in this  
19 proceeding.

20 Q. Well, I'm a participant in the  
21 proceeding. What if it took me a year to fully  
22 understand it? Should we delay the tax benefits for  
23 a year?

24 MR. KELTER: Objection. This is  
25 argumentative.

1 EXAMINER ADDISON: Mr. Kurtz, care to  
2 rephrase?

3 MR. KURTZ: Okay.

4 Q. What if any of the stakeholders here took  
5 a year to understand it? Should we delay the tax  
6 refunds while they plow through it?

7 MR. KELTER: Objection. This is still  
8 argumentative.

9 MR. KURTZ: I think it's not  
10 argumentative. He says his recommendation is to  
11 delay the tax refunds until stakeholders fully  
12 understand the cost/benefit analysis. I'm asking  
13 what if a stakeholder never understands the cost  
14 benefits.

15 EXAMINER ADDISON: Thank you, Mr. Kurtz.

16 Mr. Volkmann, would your recommendation  
17 starting on line 9 on page 3, would you still have  
18 that recommendation even if it did require parties to  
19 take a year to fully understand the CBA?

20 THE WITNESS: No. I don't believe it  
21 would take a year. Again, the questions I raise are  
22 very specific about some very specific outage records  
23 that were included in the analysis, and in my opinion  
24 it would not take anywhere near a year to resolve  
25 those questions.

1           Q.     (By Mr. Kurtz) Would it take more than  
2     the two and a half months you've already had the CBA?

3           A.     I don't believe so, no.

4           Q.     Okay. The costs of the grid mod are  
5     fairly understood, aren't they? The capital costs  
6     and the incremental O&M expenses?

7           A.     Those are, but the full revenue  
8     requirement associated with those costs are not  
9     included in the CBA.

10          Q.     But the benefits are the harder things to  
11     quantify, are they not?

12          A.     The focus of my testimony is on the  
13     quantification of benefits.

14          Q.     Okay. Can you turn to page 7 of your  
15     testimony. Your answer to the first question, "What  
16     are some of the examples" -- "What are some examples  
17     of the Benefits in the CBAs," do you see that?

18          A.     I do.

19          Q.     The first one you list is reduced  
20     customer energy consumption; is that correct?

21          A.     Correct.

22          Q.     That relies on something called the  
23     consumer behavior study, doesn't it?

24          A.     I don't agree with your conclusion there.

25          Q.     You discuss it extensively beginning on

1 page 20. You talk about the reduced energy  
2 consumption, 55 million, 20-year nominal, and then it  
3 starts with a 10 percent customer participation rate.  
4 And then you talk about -- and you quote from the  
5 consumer behavior study. Did I misunderstand your  
6 testimony?

7 A. You did not. Your earlier question, the  
8 category of benefits associated with reduced customer  
9 energy consumption, the Companies assumed a magnitude  
10 of those benefits, specifically the 2 percent and the  
11 10 percent participation came from that behavior  
12 study. I misunderstood your first question.

13 Q. Just the title, consumer behavior study,  
14 doesn't that indicate it's somewhat subjective, hard  
15 to quantify, measuring the behavior of millions of  
16 consumers?

17 A. Measuring the actual energy saved in the  
18 peak-demand reduction is very easy to quantify.

19 Q. What is a consumer behavior study?

20 A. It's the title of the final evaluation of  
21 the Companies' Smart Grid investment grant pilot.

22 Q. Let me back up one second. The  
23 cost/benefit analysis is 20 years, correct?

24 A. Yes.

25 Q. If we made it 25 years, 15 years,

1 wouldn't that change the outcome?

2 A. Yes.

3 Q. Okay. What discount rate did the Company  
4 use to get to present value?

5 A. I can't recall off the top of my head.

6 Q. If we change the discount rate, that  
7 would change all the numbers too, wouldn't it?

8 A. It would, yes.

9 Q. The next benefit you list is reduced CO2,  
10 back on page 7.

11 A. Yes.

12 Q. Is that right? Reasonable -- reasonable  
13 people can disagree about the value of that, could  
14 they not?

15 A. They could, yes.

16 Q. Some people might put zero benefit on it,  
17 and your clients might put a relatively high number  
18 on it?

19 A. That's true.

20 Q. In order for the stakeholders to fully  
21 understand the cost/benefit analysis, we may never  
22 get agreement on that number, would you agree?

23 A. Again, the focus of my recommendations in  
24 my testimony are very specific to the reliability  
25 benefits from the proposed distribution automation

1 plan. I'm not questioning anything related to CO2  
2 emissions.

3 Q. But a stakeholder might, I might, if this  
4 goes into Phase 2.

5 A. That's true, you might.

6 Q. Yeah. And the benefits of improved  
7 reliability rely on something called an interruption  
8 cost estimate from the Department of -- Department of  
9 Energy, an ICE estimate?

10 A. ICE calculator.

11 Q. Could reasonable people disagree about  
12 the benefits of improved reliability?

13 A. Yes.

14 Q. Isn't there a collaborative process  
15 called for in the Stipulation?

16 A. Yes.

17 Q. Do you think any of your concerns could  
18 be addressed in the collaborative?

19 A. I'm not familiar with how the  
20 collaborative operates, but presumably it could, yes.

21 MR. KURTZ: Thank you, your Honor.

22 EXAMINER ADDISON: Thank you, Mr. Kurtz.

23 IEU-Ohio.

24 MR. DARR: No questions.

25 EXAMINER ADDISON: Direct Energy.



1 MS. GLOVER: Yes, your Honors, a few.

2 - - -

3 CROSS-EXAMINATION

4 By Ms. Glover:

5 Q. Good morning, Mr. Volkmann.

6 A. Good morning.

7 Q. My name is Becky Glover. I represent  
8 Direct Energy, and I just have a few questions on  
9 your recommendations regarding enabling technologies  
10 and smart thermostats specifically, but enabling  
11 technologies generally. Can you turn to your  
12 testimony on page 20. I believe in the revised  
13 version it's line 10 and 11, I'll be looking at.  
14 There you reference a 10 percent customer  
15 participation rate. Specifically regarding Grid Mod  
16 I, what does that 10 percent represent? Is it  
17 10 percent of all of the Companies' customers,  
18 10 percent of the 700,000 meters, or something else?

19 A. It's 10 percent of the customers that  
20 receive a smart meter under Grid Mod I is my  
21 recollection.

22 Q. And do you happen to know the current  
23 number of customers in the Companies' service  
24 territory that already have some sort of enabling  
25 technology or device?

1           A.    I don't know.

2           Q.    And I believe you talked to Mr. Lang a  
3 bit about, you know, at least one other method by  
4 which customers might receive smart thermostats,  
5 going out and purchasing them themselves. Do you  
6 know if there's any other methods that customers  
7 currently are able to receive smart thermostats or  
8 any other enabling devices, other programs that the  
9 Companies might have that other organizations might  
10 provide to customers? Are you aware of any of those?

11          A.    I believe, during the deposition,  
12 Mr. Lang mentioned the existing program in the  
13 Companies' energy efficiency portfolio related to  
14 smart thermostats. I'm not familiar with the details  
15 of that.

16          Q.    Do you know of any other utilities that  
17 might cover the customers in the Companies' service  
18 territory that offer rebate programs or incentives?

19          A.    I'm not aware of any.

20          Q.    Do you know of any low-income programs  
21 that do -- provide similar incentives?

22          A.    I'm not familiar with the details of the  
23 Companies' energy efficiency programs.

24          Q.    Okay. Let's switch to I believe in the  
25 new version it's page 23, lines 26 and 28 -- to 28,

1       excuse me.

2               A.     I'm sorry.  Can you repeat that?

3               Q.     Sure, yeah.  It's page 23, lines 26  
4       through 28.  It's where you recommend that the  
5       Commission require the Companies.  Do you see that  
6       sentence?

7               A.     Yes.

8               Q.     I'm looking at the public version.  I  
9       don't know if that helps.  So you recommend here that  
10      the Commission require the Companies to modify Grid  
11      Mod I to include investments in the deployment of  
12      smart thermostats; is that right?

13              A.     Correct.

14              Q.     Are you a lawyer, Mr. Volkmann?

15              A.     I am not.

16              Q.     Do you know if the Commission has the  
17      legal authority to require the Companies to do that?

18              A.     I don't know.

19              Q.     And would it be safe to assume you're not  
20      recommending the Commission exceed its statutory  
21      authority?

22              A.     That's correct.

23                    MS. GLOVER:  I believe that's all my  
24      questions.  Thank you.  Thank you, Mr. Volkmann.

25                    EXAMINER ADDISON:  Thank you, Ms. Glover.

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CROSS-EXAMINATION

By Ms. Allen:

Q. Good morning, Mr. Volkmann.

A. Good morning.

Q. I'm Bethany Allen from IGS. I just have one question for you. Can you turn to page 24. And I'm looking at line 2 of your testimony that was passed out this morning. You stated "the Commission should ensure that the Companies make smart thermostats understandable and easily available to customers"; is that correct?

A. Correct.

Q. You are not advocating for or suggesting any particular method that would make smart thermostats "easily available to customers," correct?

A. I am not recommending a specific method.

MS. ALLEN: Okay. Thank you.

EXAMINER ADDISON: Thank you, Ms. Allen.  
Mr. Lindgren.

MR. LINDGREN: Thank you, your Honor.

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CROSS-EXAMINATION

By Mr. Lindgren:

Q. Good morning, Mr. Volkmann. My name is Tom Lindgren. I represent the Commission Staff.

A. Good morning.

Q. You are advocating the Commission modify the Stipulation to include the deployment of smart meters; is that right?

A. No. The Stipulation already includes the deployment of smart meters.

Q. Or excuse me. I meant smart thermostats.

A. Correct.

Q. Would you advocate that the Commission then delete something else from the current budget, or would you just add to the current budget?

A. I don't have a specific recommendation on how it's funded. My focus was on achieving the 10 percent participation rate that's in the business case. I leave it up to the Companies to determine the best way to achieve that.

Q. You understand that if smart thermostats were added to the current budget, that would increase the cost impact on customers; is that right?

A. What I'm not clear on is if those would be offset by incremental benefits.

1           Q.    But you don't know if they would be  
2   offset.

3           A.    I have not done that analysis.

4           MR. LINDGREN:  Thank you.  I have no  
5   further questions.

6           EXAMINER ADDISON:  Thank you very much.  
7   Mr. Kelter, redirect?

8           MR. KELTER:  Can you give us a couple  
9   minutes, your Honor?

10          EXAMINER ADDISON:  Certainly.  Let's go  
11   off the record.

12          (Recess taken.)

13          EXAMINER ADDISON:  We'll go back on the  
14   record.

15          Mr. Kelter, redirect?

16          MR. KELTER:  Thank you, your Honor.

17                                 - - -

18                                 REDIRECT EXAMINATION

19   By Mr. Kelter:

20           Q.    Mr. Volkmann, I have just a few questions  
21   for you on redirect.  Mr. Lang -- do you recall  
22   Mr. Lang asked you about differences in designs in DA  
23   systems?

24           A.    Yes.

25           Q.    Would such differences in design of DA

1 systems alter your concerns?

2 A. No. Regardless of the specific  
3 distribution automation design scheme that the  
4 Companies intend to deploy, I still have concerns  
5 about duplicate outage records outliers that are  
6 skewing the averages, so my concerns are still valid.

7 Q. Do you recall that Mr. Lang asked you  
8 some questions about smart thermostats, including  
9 whether utilities have offered smart thermostats  
10 without doing grid mod?

11 A. I recall that, yes.

12 Q. Are there advantages to doing the smart  
13 thermostats with grid mod?

14 A. I think the Companies demonstrated that  
15 in their pilot in the Cleveland area where they  
16 deployed smart meters, some form of distribution  
17 automation, plus the enabling technologies,  
18 specifically the programmable thermostats, and it was  
19 the combination of those technologies that resulted  
20 in the maximum energy savings for customers. So I  
21 believe there is an advantage to doing them together.

22 Q. Do you recall Mr. Lang asked you whether  
23 you had looked at other utility analysis of DA  
24 benefits during storms?

25 A. I recall it, yes.

1           Q.    Do utilities normally include storm  
2    reliability improvements in their business case for  
3    DA?

4           A.    Typically, no.  Typically the grid  
5    modernization business case analyses I've seen, as is  
6    most often the case in reporting overall reliability,  
7    excludes major storm events, so the fact that the  
8    Companies have included that in their analysis, and  
9    the fact that it is the significantly-highest source  
10   of benefits is very unusual to me.

11          Q.    And Mr. Lang asked you if you knew  
12   whether there was an intense storm in the study  
13   period comparable to April 2005.  Do you recall that  
14   question?

15          A.    I do, yes.

16                   (CONFIDENTIAL PORTION EXCERPTED.)

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(OPEN RECORD.)

MR. KELTER: Thank you, Mr. Volkmann.  
Your Honors, that's all I have.

MR. LANG: I'm sorry, your Honor, if I  
may, the one number that he referenced in his answer,  
I believe is still part of the --

THE WITNESS: Whoops.

MR. LANG: -- confidential transcript.  
If we could simply ask the court reporters to put the  
question and answer in the confidential portion, we  
can address it that way.

EXAMINER ADDISON: Absolutely. Thank  
you, Mr. Lang.

MR. LANG: Thank you.

MR. KELTER: Would it make sense just to  
re-ask that question and then have a confidential Q  
and A as well?

EXAMINER ADDISON: It's been moved into

1 the confidential.

2 MR. KELTER: Okay. We're good.

3 EXAMINER ADDISON: Any additional  
4 questions, Mr. Kelter?

5 MR. KELTER: No, your Honors. Thank you.

6 EXAMINER ADDISON: Thank you very much.  
7 Ms. Whitfield.

8 MS. WHITFIELD: No questions, your Honor.

9 EXAMINER ADDISON: Ms. Bojko.

10 MS. BOJKO: Just one, your Honor.

11 - - -

12 RECROSS-EXAMINATION

13 By Ms. Bojko:

14 Q. Sir, your recommendations in your  
15 testimony, including those on page 3, are with regard  
16 to the grid modernization portion of the  
17 Stipulation; is that correct?

18 A. That's correct.

19 MS. BOJKO: Thank you. No further  
20 questions.

21 EXAMINER ADDISON: Thank you very much.  
22 Mr. Royer.

23 MR. ROYER: Yes, just briefly.

24 - - -

25

RECROSS-EXAMINATION

By Mr. Royer:

Q. In your answer regarding the --

EXAMINER ADDISON: Mr. Royer, would you mind just using your microphone.

MR. ROYER: I'm sorry. They took it away from me.

EXAMINER ADDISON: Thank you very much.

Q. In your answer regarding the pilot project, you refer to the deployment of -- or the -- included the programmable thermostats, I believe you characterize them as being smart thermostats. Is there a distinction in your mind between a programmable thermostat and a smart thermostat?

A. There is. In my testimony, I describe some of the characteristics of a smart thermostat that aren't necessarily included with the programmable thermostat.

Q. But it's your understanding the pilot program, the CEI pilot program, included programmable thermostats, not smart thermostats; is that correct?

A. That's my understanding.

MR. ROYER: Thank you.

EXAMINER ADDISON: Thank you very much.

OCC.

1 MS. O'BRIEN: No questions, your Honor.

2 EXAMINER ADDISON: Thank you.

3 IEU-Ohio.

4 MR. DARR: No questions.

5 EXAMINER ADDISON: Direct Energy.

6 MS. GLOVER: No questions.

7 EXAMINER ADDISON: IGS.

8 MS. ALLEN: No questions.

9 EXAMINER ADDISON: Mr. Lindgren.

10 MR. LINDGREN: No questions.

11 EXAMINER ADDISON: Thank you.

12 Mr. Lang, please proceed.

13 MR. LANG: Thank you.

14 - - -

15 RECROSS-EXAMINATION

16 By Mr. Lang:

17 Q. Mr. Volkmann, you had -- one of your  
18 previous answers was your opinion as to what is  
19 typical with regard to utilities reporting  
20 storm-related reliability or, you know, excluding  
21 storm-reliability records, and your -- your  
22 experience with regard to reliability reporting by  
23 utilities is, in addition to this case, the Southern  
24 California Edison case that you reviewed, you  
25 provided testimony in, and then also Duke North

1 Carolina and Dominion Virginia that you had  
2 evaluated, correct?

3 A. That's correct. Additionally, when I  
4 worked for Pacific Gas & Electric, I was in the  
5 distribution engineering group and I was responsible  
6 for publishing the reliability reports of the  
7 company. It was my first introduction to the world  
8 of SAIDI and SAIFI.

9 Q. Yes. And with regard to Southern  
10 California Edison, Dominion Virginia and Duke North  
11 Carolina, your experience is that Duke North Carolina  
12 reported reliability with major storms, the other  
13 utilities did not, correct?

14 A. Yes. My recollection is Duke North  
15 Carolina reported projected reliability improvements  
16 both including and excluding major storms. My  
17 recollection also is that the projected improvements  
18 during major storms was less than during -- than  
19 excluding major storms.

20 MR. LANG: Your Honors, I would move to  
21 strike his response from "My recollection" going  
22 forward. He had answered my question.

23 MR. KELTER: Your Honor, he opened the  
24 door.

25 EXAMINER ADDISON: May I have the

1 question and answer read back, please?

2 (Record read.)

3 EXAMINER ADDISON: I'm going to go ahead  
4 and grant the motion to strike starting with "My  
5 recollection."

6 MR. LANG: I have no further questions,  
7 your Honor.

8 EXAMINER ADDISON: Thank you, Mr. Lang.

9 MR. KELTER: Can I ask a redirect, your  
10 Honor?

11 EXAMINER ADDISON: No, you may not.  
12 Please proceed.

13 EXAMINER PRICE: I just had a couple  
14 questions.

15 - - -

16 EXAMINATION

17 By Examiner Price:

18 Q. Can you turn to page 3 of your testimony.  
19 The first bullet point. You ask the Commission --  
20 recommend the Commission delay approval of the  
21 Stipulation until Staff -- I'm paraphrasing here --  
22 fully understands the Grid Mod CBA. Were you here  
23 for Ms. Schaefer's testimony yesterday?

24 A. I was not.

25 Q. Have you ever spoken with Ms. Schaefer?

1           A.    Yes.

2           Q.    Do you have any basis to believe that she  
3 does not understand the CBA?

4           A.    I believe she understands the CBA.

5           Q.    Do you have a basis to believe anybody  
6 else on the Staff does not understand the CBA?

7           A.    I don't have any basis for that.

8                   EXAMINER PRICE:  Thank you.  That's all I  
9 have.

10                   MS. FLEISHER:  Sorry, your Honor.  I'm  
11 concerned that part of your questions were going to  
12 confidential settlement communications and that's  
13 constraining what we can have in the record.  So I  
14 don't want that to be only used against us.  So if we  
15 can -- I don't know if -- it might be helpful to ask  
16 Mr. Volkmann whether some of the communications with  
17 Staff went on in the context of confidential  
18 settlement discussions.

19           Q.    (By Examiner Price) Have you ever spoken  
20 to Ms. Schaefer outside the context of confidential  
21 settlement negotiations?

22           A.    About this proceeding?

23           Q.    Yes.

24           A.    No.

25           Q.    Do you have any basis to believe that any

1 relevant member of Staff, outside of confidential  
2 negotiations, does not fully understand the CBA?

3 A. I am a bit surprised that the duplicate  
4 outage records, that I believe inflate the projected  
5 reliability improvements, were not flagged; so I --  
6 that would be a basis.

7 Q. That's your basis.

8 A. Yeah.

9 EXAMINER PRICE: Thank you.

10 Ms. Fleisher, no double teaming on  
11 witnesses. It's Mr. Kelter's witness.

12 MS. FLEISHER: Mr. Kelter doesn't have  
13 the --

14 EXAMINER PRICE: You slipped one in there  
15 on us.

16 I have nothing further.

17 EXAMINER ADDISON: Thank you,  
18 Mr. Volkmann. You are excused.

19 Mr. Kelter.

20 MR. KELTER: Oh. Your Honor, ELPC moves  
21 for the inclusion of ELPC Exhibits 32 and 33 and the  
22 attachments into the record.

23 EXAMINER ADDISON: Are there any  
24 objections to the admission of ELPC Exhibits No. 32  
25 or 33C into the record?



1                   Hearing none, they will be admitted.

2                   (EXHIBITS ADMITTED INTO EVIDENCE.)

3                   MR. KELTER: Thank you, your Honor.

4                   EXAMINER ADDISON: Thank you.

5                   Mr. Royer.

6                   MR. ROYER: Thank you, your Honor. STC  
7 will call Tamara Dzubay to the stand, please.

8                   (Witness sworn.)

9                   EXAMINER PRICE: Please be seated and  
10 state your name and business address for the record.

11                  THE WITNESS: My name is Tamara Dzubay,  
12 and my business address is 207 Queens Quay West,  
13 Toronto, Ontario.

14                  EXAMINER PRICE: If you could please turn  
15 on your microphone, too.

16                  THE WITNESS: Sure.

17                  EXAMINER PRICE: Please proceed,  
18 Mr. Royer.

19                  MR. ROYER: Thank you. I would like to  
20 have marked for purposes of identification as STC  
21 Exhibit 4, the direct testimony of Tamara Dzubay  
22 which was filed in this matter on January 25th of  
23 this year.

24                  EXAMINER PRICE: So marked.

25                  (EXHIBIT MARKED FOR IDENTIFICATION.)

MR. ROYER: I would also like to have marked a one-page sheet that shows certain corrections to Ms. Dzubay's testimony, in lieu of having her make those corrections orally on the stand, and I'd like to have that marked as STC Exhibit 4A.

EXAMINER PRICE: It will be so marked.

(EXHIBIT MARKED FOR IDENTIFICATION.)

MR. ROYER: And I will point out these corrections were distributed to the parties prior to her deposition.

EXAMINER PRICE: Thank you.

- - -

TAMARA DZUBAY

being first duly sworn, as prescribed by law, was examined and testified as follows:

DIRECT EXAMINATION

By Mr. Royer:

Q. Good morning.

A. Good morning.

Q. Do you have before you what's been marked as your direct testimony of which has been marked as Exhibit 4?

A. Yes.

Q. Do you have any corrections or additions

1 to that testimony?

2 A. Yes. On page 4 of the testimony,  
3 Footnote 5, the section in quotation marks should  
4 actually be attributed to page 27 of the PowerForward  
5 Roadmap. And on page 9, line 16, the -- it says  
6 "SGGC." It should read "SGCC."

7 Q. And have you -- and have you -- in  
8 addition, do you have a correction to page 9, lines 3  
9 through 10?

10 A. Yes.

11 Q. And is that what's displayed on STC  
12 Exhibit 4A?

13 A. Yes.

14 Q. Was this testimony prepared by you or  
15 under your direction and supervision?

16 A. Yes.

17 Q. If I were to ask you the questions  
18 contained in the testimony here today, would your  
19 answers be the same?

20 A. Yes.

21 MR. ROYER: The witness is available.

22 EXAMINER PRICE: Thank you.

23 MR. LANG: Your Honor, would -- your  
24 Honor, would you entertain a motion to strike?

25 EXAMINER PRICE: I certainly will.

1 MR. LANG: Thank you.

2 We have one portion of the testimony.  
3 It's on page 19 and it is with regard to Footnote 29  
4 and the accompanying text on page 19 which starts  
5 with "which" on line 13, going through to the end of  
6 line 14.

7 The basis for the motion is it's hearsay.  
8 This is not a government report or data. It's a --  
9 actually a PowerPoint presentation by a person with  
10 The Brattle Group and it's likely double hearsay  
11 because there's actually no evidence in the report  
12 where the person giving the PowerPoint presentation  
13 got his information. I do have one copy of the  
14 report and the page that she referenced, if the Bench  
15 would like to see it, but I would move that, you  
16 know, there's no, you know, the person that gave this  
17 presentation is not available for cross-examination  
18 here at the hearing, and so I move to strike this  
19 portion of her testimony.

20 EXAMINER PRICE: Mr. Royer.

21 MR. ROYER: Yes, your Honor. The  
22 witness's responsibilities include keeping abreast of  
23 developments that impact the -- that relate to smart  
24 thermostat deployment. In the course of that, she  
25 consulted all sorts of publicly-available

1 information, as this is, in forming her opinions, and  
2 I think it's fair game for her to include.

3 EXAMINER PRICE: Publicly available or  
4 not, it's still hearsay, and it will be stricken.

5 MR. LANG: Thank you, your Honor.

6 EXAMINER PRICE: Thank you.

7 MR. LANG: That completes the motion.

8 MR. ROYER: Your Honor --

9 MR. KELTER: Could you clarify which  
10 lines are stricken?

11 MR. ROYER: What is being stricken?

12 EXAMINER PRICE: I believe it is page 19,  
13 line 13, commencing with "which" and ending with the  
14 period in Footnote 29 as well as Footnote 29.

15 MR. LANG: Correct.

16 EXAMINER PRICE: ELPC, cross?

17 MS. FLEISHER: No questions, your Honor.

18 EXAMINER PRICE: OEC?

19 MS. LEPPLA: No questions, your Honor.

20 EXAMINER PRICE: Kroger?

21 MS. WHITFIELD: No questions, your Honor.

22 EXAMINER PRICE: Ms. Bojko?

23 MS. BOJKO: No questions, your Honor.

24 EXAMINER PRICE: Company is proposing to  
25 go first?

1 MR. LANG: Sure.

2 - - -

3 CROSS-EXAMINATION

4 By Mr. Lang:

5 Q. Good morning, Ms. Dzubay.

6 A. Good morning.

7 Q. Now, you started work for ELPC in  
8 September 2016, after getting your MBA from the  
9 Kellogg School, correct?

10 A. Yes.

11 Q. Then you worked for ELPC until  
12 November 20th or 21st of 2018, correct?

13 A. Yes.

14 Q. And then you started work for ecobee in  
15 December of 2018, so you've been there for about  
16 eight weeks, correct?

17 A. Correct.

18 Q. As the -- as the regulatory affairs  
19 manager of ecobee, one of your responsibilities is to  
20 promote the use of smart thermostats in support of  
21 energy efficiency, correct?

22 A. It's to seek regulatory opportunities in  
23 which our devices, which automate achieving energy  
24 savings and peak-demand reduction, can provide  
25 customer and system-wide benefits.

1           Q.    And the state programs that encourage the  
2    use of smart thermostats for those purposes helps the  
3    bottom line of ecobee and other smart thermostat  
4    manufacturers, correct?

5           A.    Correct.  And my recommendation focuses  
6    on rebates that would be applicable to all ENERGY  
7    STAR certified products that are smart thermostats  
8    and there are over 30 of those products from a number  
9    of manufacturers that are not ecobee.

10           MR. LANG:  Your Honor, I would move to  
11   strike the answer after "Correct" which fully  
12   answered my question.

13           EXAMINER PRICE:  Generally we've allowed  
14   witnesses one -- one warning before we strike their  
15   testimony, but this one was so egregious, I'll save  
16   the warning for the next time and grant the motion to  
17   strike.

18           If you can answer Mr. Lang's questions  
19   directly.  If you have anything to add later, I'm  
20   sure Mr. Royer will be happy to get that out on  
21   redirect.

22           THE WITNESS:  Sure.

23           Q.    (By Mr. Lang) Ms. Dzubay, you do not  
24   consider yourself an expert in electric utility grid  
25   modernization, correct?

1           A.    I do not.

2           Q.    And you have not worked on any aspects of  
3 grid modernization investments such as distribution  
4 automation or advanced distribution management  
5 systems, correct?

6           A.    Correct.

7           Q.    And at no time, prior to filing your  
8 testimony in -- preparing your testimony in this  
9 proceeding, have you performed or run a cost/benefit  
10 analysis related to grid modernization, correct?

11          A.    That is not correct. I received the  
12 Company's cost/benefit analysis on January 30 and,  
13 since that time, I have run a cost/benefit analysis  
14 which includes my program recommendation.

15               MR. LANG: Your Honor, my question was  
16 specific to prior to preparing her testimony in this  
17 case, so could Ms. -- if Ms. Dzubay could answer that  
18 question.

19          A.    That's correct.

20          Q.    Now, your testimony references different  
21 kinds of thermostats, right?

22          A.    Yes.

23          Q.    The most basic type is a manual  
24 thermostat, correct?

25          A.    Correct.



1           Q.   And there are also programmable  
2 thermostats where you can program the temperature to  
3 go up or down on a daily or weekly basis, right?

4           A.   Right.

5           Q.   Then you also refer in your testimony to  
6 a programmable communicating thermostat, or PCT,  
7 which is a programmable thermostat that can receive  
8 signals from a utility, correct?

9           A.   Correct.

10          Q.   And you also refer in your testimony to  
11 WiFi-programmable thermostats which enable the user  
12 to monitor and control their heating and cooling  
13 remotely through a computer or on their phone,  
14 correct?

15          A.   Correct.

16          Q.   And then there's also the smart or  
17 learning thermostat which is also WiFi-enabled and,  
18 among other things, learns how to program itself,  
19 correct?

20          A.   That's one of the benefits.

21          Q.   And if a homeowner has a smart thermostat  
22 and also has access to time-varying rates, the smart  
23 thermostat manufacturer can program, such as ecobee,  
24 can program the thermostat with those rates to allow  
25 time-of-use optimization, correct?

1           A.    Can you repeat the question?

2                   MR. LANG:   Sure.   If I can have it read  
3 back, please?

4                   EXAMINER PRICE:   Please.

5                   (Record read.)

6           A.    Correct.

7           Q.    And the current-generation ecobee smart  
8 thermostat is the ecobee4 and that retails for  
9 approximately \$249, correct?

10          A.    Correct.

11          Q.    And then the current-generation Nest  
12 thermostat also retails for approximately \$249,  
13 correct?

14          A.    Correct.

15          Q.    Now, in terms of enabling devices, there  
16 are also, in addition to smart thermostats, there are  
17 other types of internet-connected devices that  
18 control load, such as water heaters or smart  
19 appliances, correct?

20          A.    Correct.

21          Q.    Now, on page 7 of your testimony, we're  
22 looking at page 7 of your testimony, starting on line  
23 16, there's the paragraph to the end of that page and  
24 there looks like a new paragraph at the top of  
25 page 8, lines 1 through 8, and that's a -- in these

1 two paragraphs you list different features that are  
2 associated with smart thermostats, correct?

3 A. Correct.

4 Q. And grid modernization and smart meters  
5 are not required for a customer to use these smart  
6 thermostat features listed in your testimony,  
7 correct?

8 A. Well, in order for time-of-use  
9 optimization to work, that would require smart meters  
10 to inform time-varying rates; otherwise, that's  
11 correct.

12 Q. And it's true that ecobee thermostats do  
13 not require smart meters or the technology that's  
14 described in the Stipulation in these proceedings to  
15 function and to provide benefits to customers,  
16 correct?

17 A. Again, in order for the time-of-use  
18 optimization feature to work, it requires  
19 time-varying rates which requires smart meters.

20 Q. But, otherwise, that's correct?

21 A. Yes.

22 Q. At the top of page 7, you reference the  
23 U.S. EPA suspension of the ENERGY STAR certification  
24 for programmable thermostats back in 2009. Do you  
25 agree that programmable thermostats that are

1 WiFi-enabled and that also have geofencing or  
2 occupancy detection can be ENERGY STAR certified?

3 A. I'm not sure I fully understand. That  
4 would -- in order for a product to be ENERGY STAR  
5 certified, it needs to either have the learning  
6 capability or it needs to have occupancy detection.

7 Q. So a programmable thermostat that  
8 includes occupancy detection as a feature, that can  
9 be ENERGY STAR certified without having the learning  
10 function, correct?

11 A. I believe so. However, ENERGY STAR  
12 certifies only smart thermostats.

13 Q. Now, there's also been an ENERGY STAR  
14 program since 2017 for connected thermostats; are you  
15 familiar with that?

16 A. Since 2017, there's an ENERGY STAR  
17 certification for smart thermostats.

18 EXAMINER PRICE: I'm not sure you  
19 answered his question. Can we have the question  
20 back, please?

21 THE WITNESS: I think what he's  
22 referencing is the smart thermostat certification  
23 from 2017.

24 EXAMINER PRICE: So your answer is "no"  
25 on connected thermostats?

1 THE WITNESS: I think those are being  
2 conflated. That is a smart thermostat designation  
3 from 2017.

4 Q. Maybe to clarify, is the -- is the ENERGY  
5 STAR certification, to your understanding, they refer  
6 to it as connected thermostat products?

7 A. I've seen it referred to only as smart  
8 thermostat products, but potentially there have been  
9 marketing materials that refer to connected.

10 MR. LANG: If we can approach, your  
11 Honor?

12 EXAMINER PRICE: You may.

13 MR. LANG: And, your Honors, we've  
14 provided a document to the witness and the Bench we'd  
15 like to have marked as Company Exhibit 5.

16 EXAMINER PRICE: So marked.

17 (EXHIBIT MARKED FOR IDENTIFICATION.)

18 Q. Ms. Dzubay, are you familiar with the  
19 document we've put in front of you called Company  
20 Exhibit 5? To put it more plainly, is this something  
21 you've seen before?

22 A. I believe I have seen it. I thought it  
23 listed smart thermostat products, but I see here in  
24 the heading it does say "For Connected Thermostat  
25 Products."

1           Q.    Now, once a smart thermostat is  
2    installed, whether it's an ecobee thermostat or a  
3    Nest thermostat or someone else's product, that is --  
4    that device is owned by the customer, the homeowner,  
5    correct?

6           A.    Correct.

7           Q.    Now, at the bottom of page 9, and also as  
8    represented in Figure 4 on page 10, you discuss the  
9    Smart Grid consumer collaborative study, published in  
10   2012; so I wanted to ask you about that.

11          A.    Sure.

12          Q.    Now, the enabling technologies reviewed  
13   in this study were in-home displays and PCTs,  
14   correct?

15          A.    Correct.

16          Q.    Is it correct that you do not remember  
17   what type of PCT?

18          A.    That's correct.

19          Q.    And Figure 4 does not speak to the costs  
20   of the technologies, only the benefits, correct?

21          A.    That's correct.

22          Q.    Now, at page 10, starting on line 4, you  
23   refer to an EPRI study, E-P-R-I, and that study  
24   involved a utility-controlled PCT, not a smart  
25   thermostat, correct?

1           A.     Correct. That study does reference smart  
2 thermostats but it involved a PCT.

3           Q.     And you are not recommending in your  
4 testimony that the Companies provide rebates for  
5 utility-controlled PCTs, correct?

6           A.     Correct. And the reason that I'm not  
7 recommending it is because smart thermostats automate  
8 those energy savings and peak-demand reduction, so  
9 it's not necessary for it to be controlled by the  
10 utility.

11          Q.     Now, at page 12, starting on line 5, you  
12 refer to an Oklahoma Gas & Electric study, and this  
13 study also involved a PCT, not a smart thermostat,  
14 correct?

15          A.     Correct.

16          Q.     And the PCT in that, that was being used  
17 by Oklahoma Gas & Electric, your understanding is it  
18 cost around \$75 per unit?

19          A.     Yes.

20          Q.     Now, you have no firsthand experience  
21 implementing a smart thermostat program along the  
22 lines of what you're recommending in your testimony,  
23 correct?

24          A.     I don't have experience implementing a  
25 program, but I have experience being part of a

1 collaborative that has helped form and improve a  
2 program.

3 Q. And that would be the -- is that the  
4 ComEd Illinois Stakeholder Advisory Group?

5 A. Correct.

6 Q. Now -- and your involvement in that  
7 collaborative, the purpose of that collaborative is  
8 to increase participation in ComEd's smart thermostat  
9 program, correct?

10 A. Correct. To help ComEd reach its goals.

11 Q. And you are aware that there are ecobee  
12 smart thermostats currently in use in the Companies'  
13 service territories, correct?

14 A. Correct.

15 Q. And that's because, as an ecobee  
16 employee, you can access the data from those devices,  
17 correct?

18 A. Correct.

19 Q. And if we look at page 16, the question  
20 and answer at lines 9 through 12, the savings value  
21 that you have calculated there is based on data from  
22 ecobee and Nest thermostats currently in use in Ohio,  
23 correct?

24 A. Correct.

25 Q. And you do not know what kind of



1 incentives, if any, these customers received to  
2 purchase these thermostats, correct?

3 A. Correct. I don't know whether the  
4 customers use an incentive. I know the current  
5 incentive program is a midstream incentive program  
6 that I don't believe results in a reduced cost to  
7 customers.

8 MR. LANG: Could I have the answer read  
9 back?

10 EXAMINER ADDISON: You may. Let's have  
11 the question and the answer.

12 (Record read.)

13 MR. LANG: And, your Honor, I would move  
14 to strike the second part of her response. After she  
15 answered my question, she went on to talk about "I  
16 know the current program," I move to strike from that  
17 point.

18 EXAMINER PRICE: We're going to deny your  
19 motion to strike and give the witness her one warning  
20 about answering the question directly and only the  
21 question, and I would note that this warning is long  
22 in coming with this witness. Let's focus on the  
23 question asked by counsel.

24 MR. LANG: And, your Honor, that's  
25 actually all my questions.

1 EXAMINER PRICE: There we go.

2 MR. LANG: But there may be others.

3 EXAMINER PRICE: OEG.

4 MR. KURTZ: Thank you, your Honor.

5 - - -

6 CROSS-EXAMINATION

7 By Mr. Kurtz:

8 Q. Good morning.

9 A. Good morning.

10 Q. I have questions about who the Smart  
11 Thermostat Coalition is. That's an ad hoc coalition  
12 of ecobee and Google?

13 A. Yes.

14 Q. When was that established?

15 A. It was established, I started working at  
16 ecobee in December, so I am unaware of any activity  
17 prior to when I started working there, but it was  
18 established in December.

19 Q. December of?

20 A. 2018.

21 Q. Okay. So just a couple months ago?

22 A. Correct. It could have, because it's an  
23 ad hoc coalition, it could have participated in other  
24 matters when I wasn't employed there, I'm not sure.

25 Q. What is the approximate market share of

1 ecobee and the Nest thermostats with respect to the  
2 smart thermostat market?

3 A. That is confidential information.

4 Q. Okay. Well, your recommendation is that  
5 the Stipulation be modified; is that correct?

6 A. That the Stipulation be modified to  
7 include smart thermostat incentives for customers  
8 that have central AC, WiFi, and don't currently own a  
9 smart thermostat.

10 Q. So your recommendation is the Commission  
11 order consumers, as part of the cost of this, to have  
12 a \$100 instant rebate for 210,000 smart thermostats?

13 A. Correct.

14 Q. Okay. So the consumer base of  
15 FirstEnergy would pay for this \$100 rebate, correct?

16 A. Correct.

17 Q. Okay. And that would be used to buy your  
18 product or to buy Google's product.

19 A. To buy an ENERGY STAR certified smart  
20 thermostat product.

21 Q. Even though -- well, you guys might have  
22 99 percent of the market share, I don't know,  
23 apparently it's confidential. Who else would they  
24 buy it from?

25 A. There are a number of other

1 manufacturers.

2 Q. Well, why doesn't Google just -- Google  
3 is a big company, right?

4 A. Yes.

5 Q. Why don't they just lower -- why don't  
6 they give the \$100 rebate?

7 MR. ROYER: Objection. She doesn't work  
8 for Google.

9 MR. KURTZ: Google is part of her ad hoc  
10 coalition.

11 MR. ROYER: She can't speak for what  
12 Google would do. You can ask her why ecobee doesn't.  
13 She can answer that.

14 Q. Why doesn't your company just give a \$100  
15 rebate?

16 A. I can't speak about pricing information.

17 Q. Okay. You believe that the Company is  
18 open to modifications of its Grid Mod plan because,  
19 on page 3, you quote from their Application which  
20 basically says that, correct?

21 A. Which line?

22 Q. The quote. The single indented quote.

23 A. That was from the original grid  
24 modernization plan.

25 Q. But that was the language you cite,

1 that's the language you cite indicating a willingness  
2 of the Company to be open to changes to its Grid Mod  
3 plan, correct?

4 A. That's what I cite as the Companies'  
5 original stated objective.

6 Q. Do you know when this statement was made?

7 A. I think a few years ago.

8 Q. Would you accept that the Application was  
9 filed on February 29, 2016?

10 A. Yes.

11 Q. Okay. So three years ago?

12 A. Uh-huh.

13 Q. When did ecobee first approach the  
14 Company about modifying its Grid Mod plan?

15 A. Through this intervention.

16 Q. Why did you wait three years? Why didn't  
17 you talk to them about it three years ago?

18 A. I'm unaware whether the conversations  
19 happened before I was employed at ecobee, so I can't  
20 answer that.

21 Q. Do you know if Google approached  
22 FirstEnergy, three years ago, to -- about the Grid  
23 Mod plan?

24 A. Again, I can't speak for what Google has  
25 or hasn't done.

1 MR. KURTZ: Okay. Thank you, your Honor.  
 2 EXAMINER PRICE: Thank you.  
 3 IEU-Ohio.  
 4 MR. DARR: No questions.  
 5 EXAMINER PRICE: OCTA.  
 6 MS. PETRUCCI: No questions.  
 7 EXAMINER PRICE: IGS.  
 8 MS. ALLEN: No questions.  
 9 EXAMINER PRICE: OPAC.  
 10 MS. MOONEY: No questions.  
 11 EXAMINER PRICE: Stinson is not here.  
 12 Direct Energy.  
 13 MS. GLOVER: Just a couple questions.

14 - - -

15 CROSS-EXAMINATION

16 By Ms. Glover:  
 17 Q. Good morning.  
 18 A. Good morning.  
 19 Q. If I could have you turn to page 20 of  
 20 your testimony. No, that's not -- page 18. Page 18.  
 21 Sorry. And looking at lines 6 through 8, you  
 22 reference the 210,000 out of 700,000 customers as  
 23 your recommendation for the number of smart  
 24 thermostats to be deployed through this program; is  
 25 that correct?

1 A. Correct.

2 Q. What is the significance of the 210,000  
3 number?

4 A. Why -- are you asking why am I  
5 recommending that number?

6 Q. Right.

7 A. I'm recommending that number based on my  
8 experience with the ComEd program in terms of knowing  
9 it's a number that's achievable and, additionally, a  
10 number that's significant enough to create not only  
11 customer benefits but systemwide benefits.

12 Q. And do you know the current number of  
13 customers in the Companies' service territory that  
14 already have smart thermostats?

15 A. I don't. I believe there was a discovery  
16 response that asked the Company and their response  
17 was that it was not relevant.

18 Q. If we turn to page 16, lines 15 through  
19 17, you make the recommendation that the Companies be  
20 required to provide smart thermostat incentives to  
21 customers; is that right?

22 A. Correct.

23 Q. Do you know -- are you a lawyer?

24 A. I am not.

25 Q. Do you know if the Commission has the

1 legal authority to require the Company to provide  
2 those incentives?

3 A. I don't.

4 Q. And I don't know if you were here  
5 earlier, but I'll ask you, is it safe to assume  
6 you're not recommending the Commission exceed their  
7 statutory authority?

8 A. Correct.

9 Q. And I believe there was a little bit of  
10 discussion with Mr. Lang about other methods  
11 customers -- or, customers that might already have  
12 smart thermostats and how they might acquire those.  
13 Are you aware of the -- of any other programs,  
14 whether through the FirstEnergy Companies or other  
15 utilities, for customers to acquire smart  
16 thermostats?

17 A. In other territories, electric rebates  
18 are coordinated with gas rebates. In this case, I  
19 don't believe Dominion has a rebate program; so,  
20 again, in this case, my understanding of the rebate  
21 that's offered to customers in this territory is that  
22 it's a midstream rebate that does not result in a  
23 reduced price to the customer.

24 Q. Do you know of any other nonutility  
25 programs that might offer incentives or rebates for



1 customers for smart thermostats?

2 A. I don't.

3 MS. GLOVER: That's my only questions.

4 Thank you.

5 EXAMINER PRICE: Thank you.

6 Consumers' Counsel.

7 MS. O'BRIEN: No questions, your Honor.

8 EXAMINER PRICE: Mr. Lindgren.

9 MR. LINDGREN: Thank you, your Honor.

10 - - -

11 CROSS-EXAMINATION

12 By Mr. Lindgren:

13 Q. Good morning, Ms. Dzubay.

14 A. Good morning.

15 Q. You estimate that the cost of the program  
16 you recommend to add incentives for smart  
17 thermostats, you estimate the cost would be  
18 approximately \$30 million over a three-year period;  
19 is that right?

20 A. Correct.

21 Q. And that estimate reflects an assumption  
22 that 60 percent of customers would install their own  
23 thermostats; is that right?

24 A. Correct.

25 Q. So if a lower percentage of customers do

1 their own installation, the actual costs could end up  
2 being more than 30 million; is that right?

3 A. That's correct.

4 Q. Thank you.

5 And you understand that all FirstEnergy  
6 customers would end up paying a portion of this  
7 \$30 million, whether or not they were included in the  
8 210,000 customers who would get the smart  
9 thermostats; is that correct?

10 A. The cost-recovery mechanism is outside  
11 the scope of my testimony.

12 Q. Thank you. But you haven't considered  
13 the cost impact on customers then?

14 A. I received the Companies' cost/benefit  
15 analysis on January 30th, and I did run my program  
16 recommendations, including the energy and peak demand  
17 savings assumptions that I include in my testimony,  
18 and found that it's net beneficial.

19 MR. ROYER: You said "net beneficial"; is  
20 that correct?

21 THE WITNESS: Correct.

22 MR. LINDGREN: Thank you. I have no  
23 further questions.

24 EXAMINER PRICE: Redirect?

25 MR. ROYER: May I have just a second?

1 EXAMINER PRICE: We've been going at this  
2 a while. Let's take a 10-minute break.

3 (Recess taken.)

4 EXAMINER PRICE: Back on the record.

5 Mr. Royer.

6 MR. ROYER: Thank you, your Honor.

7 - - -

8 REDIRECT EXAMINATION

9 By Mr. Royer:

10 Q. Counsel from FirstEnergy asked you if you  
11 were aware of how many smart thermostats were  
12 currently deployed in Ohio. Do you recall that  
13 question?

14 A. Yes.

15 Q. I believe you said you didn't know.

16 A. Right.

17 Q. I believe you said you did not know. Do  
18 you have any basis for providing an estimate of how  
19 many might be deployed in Ohio?

20 A. I know in the market potential study,  
21 that was from 2016, that lists that there were  
22 approximately 12,000 smart thermostats in the  
23 Companies' service territory.

24 Q. That's in the Companies' service  
25 territory, not the entire state, correct?

1           A.     Correct.

2           Q.     Okay.  And there was some earlier  
3     questioning regarding incentives with the Oklahoma  
4     Gas & Electric incentive program involving PCT.  Do  
5     you recall those questions?

6           A.     Correct.

7           Q.     And were smart thermostats generally  
8     available -- smart thermostats, as we know them now,  
9     generally available at the time that study -- that  
10    program was implemented?

11          A.     That program started in 2012, a time when  
12    the smart thermostat market was very nascent.  Since  
13    that time there have been newer features that have  
14    been developed, which I reference in my testimony,  
15    such as the time-of-use optimization feature which  
16    allows the devices to act as a form of energy storage  
17    by precooling homes.  That was not a feature that was  
18    available at the time of when that program launched.

19          Q.     Okay.  So even though the -- even though  
20    those PCTs might have been state-of-the-art at that  
21    point, the smart thermostats that you're testifying  
22    about are actually the next generation and the  
23    current state-of-the-art in that technology, correct?

24          A.     Correct.

25                 MR. ROYER:  That's all I have.

1 EXAMINER PRICE: Thank you.  
2 Recross, ELPC?  
3 MR. KELTER: No.  
4 EXAMINER PRICE: OEC?  
5 MS. LEPPLA: No, your Honor.  
6 EXAMINER PRICE: Kroger?  
7 MS. WHITFIELD: No, your Honor.  
8 EXAMINER PRICE: OMAEG?  
9 MS. BOJKO: No, your Honor.  
10 EXAMINER PRICE: Mr. Lang?  
11 MR. LANG: No, your Honor.  
12 EXAMINER PRICE: OEG?  
13 MR. KURTZ: No, your Honor.  
14 EXAMINER PRICE: IEU-Ohio?  
15 MR. DARR: No, your Honor.  
16 EXAMINER PRICE: OCTA?  
17 MS. PETRUCCI: No, thank you.  
18 EXAMINER PRICE: IGS?  
19 MS. ALLEN: No, thank you.  
20 EXAMINER PRICE: OPAE?  
21 MS. MOONEY: No, thank you.  
22 EXAMINER PRICE: OCC?  
23 MS. O'BRIEN: No, your Honor.  
24 EXAMINER PRICE: Direct?  
25 MS. GLOVER: No, thank you.

1 EXAMINER PRICE: I have a couple of  
2 questions.

3 - - -

4 EXAMINATION

5 By Examiner Price:

6 Q. First, if you can turn to page 16 of your  
7 testimony, lines 9 through 12.

8 A. Sure.

9 Q. Could you explain where the -- the  
10 provenance of the value of 15.2 percent again for the  
11 Bench. Where did that number come from?

12 A. Sure. So the ENERGY STAR module that is  
13 used for the national savings value, that is  
14 something that -- the coalition used that same module  
15 and ran that metric on its devices that are currently  
16 located in Ohio.

17 Q. Did you notify customers that you are  
18 going to run this number and use it in a regulatory  
19 proceeding?

20 A. No.

21 Q. Do you notify customers that you track  
22 this information?

23 A. There is a program around data sharing  
24 that some customers opt into, but this is all  
25 anonymized data.

1           Q.    So let's try again.  Do you notify  
2 customers that you may use their data, anonymous or  
3 not, for your business purposes?

4           A.    Customers that receive rebates sign a  
5 contract in which it's stated that their -- that  
6 their device data could be used to advance the  
7 program which would include evaluation purposes.

8           Q.    Do all the customers who you ran the data  
9 on receive rebates?  Is it possible some of those  
10 customers could have just bought this on their own?

11          A.    No.  I'm not sure how many of the  
12 customers have received rebates.

13          Q.    Do you provide customers who don't  
14 receive rebates an opportunity to opt out of their  
15 data being used in this manner?

16          A.    I don't know.

17          Q.    Mr. Kurtz asked you the market share for  
18 ecobee and Google Nest.  When you said it was  
19 confidential, were you speaking of Google Nest or  
20 ecobee?

21          A.    For both.

22          Q.    For both.  Does ecobee take steps to  
23 protect its market share from competitive -- from  
24 disclosing it to the public?

25          A.    I'm not sure.  I just know that this

1 information is deemed confidential.

2 Q. Does -- do you believe that ecobee's  
3 competitors would receive a competitive advantage by  
4 having this information?

5 A. I don't think I can answer that. I just  
6 know what I've been told which is that it's  
7 confidential information that can't be disclosed.

8 Q. Okay. Does ecobee use third -- does --  
9 the confidentiality, does that include third-party  
10 estimates of ecobee's market share?

11 A. If there is publicly-available  
12 information, then I would assume that would not be  
13 confidential.

14 Q. Does ecobee promote third-party  
15 information regarding its market share in promoting  
16 its finances?

17 A. That's outside the scope of my role. I  
18 don't know.

19 Q. Well, he asked you a fair question, and  
20 you said it was confidential, so I think it's a fair  
21 follow-up.

22 A. Right.

23 Q. Do you know whether ecobee promotes use  
24 of its market share -- that's okay. You already  
25 answered that. If you can take a look at this,



1 please.

2 EXAMINER PRICE: Mr. Royer, you may  
3 approach and see what I'm handing the witness.

4 MR. ROYER: Sure.

5 Q. Have you ever seen this document before?

6 A. I have not.

7 Q. What's the date of the document?

8 A. March 7, 2018.

9 Q. Thank you. Can you read, for the record,  
10 the first sentence of the third paragraph of this  
11 document. Let me rephrase that. Could you explain  
12 what -- can you read the title of the document?

13 A. Sure. "ecobee Closes \$80 Million Funding  
14 Round Led by Energy Impact Partners."

15 Q. And could you read -- I'll represent to  
16 you that this is a press release, downloaded from  
17 ecobee's -- ecobee's press site, just now. Can you  
18 read the -- into the record the first sentence of the  
19 third paragraph?

20 A. "Since its founding in 2007, ecobee has  
21 acquired more than a third of the smart thermostat  
22 market and experienced over 100 percent  
23 year-over-year growth, demonstrating strong market  
24 demand."

25 Q. So in response to Mr. Kurtz's fair

1 question, is it a reliable estimate that as of  
2 March 7, 2018, ecobee had over 33 percent of the  
3 market share?

4 A. Based on this document, that would be the  
5 total market share. The information I was responding  
6 to as being confidential is also the questions that I  
7 asked in preparation was whether we could disclose  
8 what the Ohio market share is and that was deemed  
9 confidential.

10 EXAMINER PRICE: I don't recall Mr. Kurtz  
11 asking you the Ohio market share, but fair enough.

12 On my own motion, I'm going to take  
13 administrative notice of this document.

14 You're excused. Thank you.

15 THE WITNESS: Thank you.

16 MS. BOJKO: I'm sorry, your Honor. For  
17 the record, could you explain what the document is?

18 EXAMINER PRICE: I'm sorry. I thought I  
19 had. It is a March 7, 2018, press release,  
20 downloaded from ecobee's website, and the site will  
21 be [https://www.ecobee.com/press/ecobee-closes-80-](https://www.ecobee.com/press/ecobee-closes-80-million-funding)  
22 million-funding.

23 MS. FLEISHER: Is that -- sorry, your  
24 Honor, is that going to be put in the record in  
25 some --

1 EXAMINER PRICE: That probably makes  
2 sense, doesn't it?

3 MS. FLEISHER: Yes.

4 EXAMINER PRICE: I will give a copy of  
5 this to the court reporter, and she will put it in  
6 the record.

7 MR. ROYER: Is this Attorney Examiner's  
8 Exhibit 1?

9 EXAMINER PRICE: I think that makes  
10 sense. We'll mark it Attorney Examiner's Exhibit 1.

11 (EXHIBIT MARKED FOR IDENTIFICATION.)

12 MR. ROYER: Are you going to put on any  
13 witnesses other than yourself?

14 EXAMINER PRICE: I just had questions. I  
15 didn't provide answers.

16 You're excused. Thank you.

17 THE WITNESS: Thank you.

18 EXAMINER PRICE: Can we move for the  
19 admission of Attorney Examiner Exhibit 1, Mr. Royer?  
20 How about your exhibits?

21 MR. ROYER: Okay. I move the admission  
22 of STC Exhibit 4 and 4A.

23 EXAMINER PRICE: Any objections?

24 Seeing none, it will be admitted.

25 (EXHIBITS ADMITTED INTO EVIDENCE.)

1 EXAMINER PRICE: Mr. Lang.

2 MR. LANG: Your Honors, Companies move  
3 Company Exhibit 5.

4 EXAMINER PRICE: Any objection to Company  
5 Exhibit 5?

6 It will be admitted.

7 (EXHIBIT ADMITTED INTO EVIDENCE.)

8 EXAMINER ADDISON: OCC, you may call the  
9 next witness.

10 MS. O'BRIEN: Your Honors, I call  
11 Mr. William Ross Willis.

12 EXAMINER ADDISON: Mr. Willis, please  
13 raise your right hand.

14 (Witness sworn.)

15 EXAMINER ADDISON: Thank you. Please be  
16 seated.

17 MR. ETTER: Your Honors, if anyone needs  
18 a copy, we have copies here.

19 EXAMINER ADDISON: Thank you.

20 - - -

21 WILLIAM ROSS WILLIS

22 being first duly sworn, as prescribed by law, was  
23 examined and testified as follows:

24 DIRECT EXAMINATION

25 By Ms. O'Brien:

1 Q. Good morning, Mr. Willis.

2 A. Good morning.

3 Q. Could you please state your name and  
4 business address for the record, please.

5 A. Yes. It's William Ross Willis. Business  
6 address is 65 East State Street, Columbus, Ohio  
7 43215, 7th Floor.

8 Q. And do you have before you the direct  
9 testimony of William Ross Willis in support of the  
10 January 25th, 2019, Supplemental Stipulation and  
11 Recommendation?

12 A. I do.

13 MS. O'BRIEN: And with that, I'd like to  
14 mark Mr. Willis's testimony as OCC 1.

15 EXAMINER ADDISON: It will be so marked.

16 (EXHIBIT MARKED FOR IDENTIFICATION.)

17 Q. Now, did -- was this testimony prepared  
18 by you or under your direction?

19 A. It was.

20 Q. And do you have any changes to your  
21 testimony today?

22 A. I do.

23 Q. And could you tell me what those changes  
24 are?

25 A. On page 7, the last footnote where it

1 says "Id at 3." It should be "Id at 6." Footnote 6.

2 Q. Is that the only change that you have?

3 A. Yes.

4 Q. Now, if I asked you the same questions in  
5 your direct testimony today, would your answers be  
6 the same?

7 A. Yes.

8 MS. O'BRIEN: And with that, your Honors,  
9 I tender the witness for cross-examination.

10 EXAMINER ADDISON: Thank you very much.

11 OPAB, any questions?

12 MS. MOONEY: No questions.

13 EXAMINER ADDISON: IGS?

14 MR. OLIVER: No questions, your Honor.

15 EXAMINER ADDISON: Direct Energy?

16 MS. GLOVER: No questions.

17 EXAMINER ADDISON: OCTA?

18 MS. PETRUCCI: No questions, your Honors.

19 EXAMINER ADDISON: IEU-Ohio?

20 MR. DARR: No questions.

21 EXAMINER ADDISON: OEG?

22 MR. KURTZ: No questions.

23 EXAMINER ADDISON: Mr. Lang?

24 MR. LANG: No, your Honor, thank you.

25 EXAMINER ADDISON: Mr. Lindgren?

1 MR. LINDGREN: No questions, your Honor.

2 EXAMINER ADDISON: Ms. Leppla?

3 MS. LEPPLA: No questions, your Honor.

4 EXAMINER ADDISON: Ms. Whitfield?

5 MS. WHITFIELD: No questions, your Honor.

6 EXAMINER ADDISON: Ms. Bojko?

7 MS. BOJKO: Unless Ms. Fleisher would  
8 like to go.

9 MS. FLEISHER: No preference.

10 EXAMINER ADDISON: Thank you.

11 MS. BOJKO: Thank you, your Honor.

12 - - -

13 CROSS-EXAMINATION

14 By Ms. Bojko:

15 Q. Good morning, Mr. Willis.

16 A. Good morning, Ms. Bojko.

17 Q. Just a few questions for you, sir. You  
18 have testified in several Commission proceedings; is  
19 that correct?

20 A. I have.

21 Q. And you have been involved in settlements  
22 before the Commission; is that correct?

23 A. Yes.

24 Q. In several cases?

25 A. Yes.

1           Q.    And you've been involved in settlements  
2 with regard to the tax -- TCJA proceedings, I'll call  
3 them?

4           A.    Yes.

5           Q.    And you've also been involved in grid  
6 modernization proceedings, correct?

7           A.    I've been involved in the proceedings.

8           Q.    Mr. Willis, OCC was not a signatory party  
9 to the Original Stipulation in this case, filed  
10 November 9, 2018, correct?

11          A.    That's correct.

12          Q.    I'd like to talk about the Supplemental  
13 Stipulation for a moment. Do you have the  
14 Supplemental Stipulation in front of you?

15          A.    I do.

16          Q.    And for the record, I believe the  
17 Supplemental Stipulation has been marked as Company  
18 Exhibit 3. If you turn to page 2 of the Supplemental  
19 Stipulation. In this part of the Supplemental  
20 Stipulation, the Supplemental Stipulation modifies  
21 the rate design for the TCJA credit mechanism; is  
22 that correct?

23          A.    That's correct.

24          Q.    And more of the tax savings were  
25 allocated to the residential class through the



1 Supplemental Stipulation, correct?

2 A. That's correct.

3 Q. And now if we could turn to your  
4 testimony that's been marked as OCC Exhibit 1, page  
5 5, on lines 6 and 8 of your testimony, you state that  
6 "The Supplemental Settlement will enable residential  
7 customers to receive a larger share" of the rate  
8 reduction, approximately \$125.9 million more; is that  
9 correct?

10 A. Yes.

11 Q. And receiving a larger share of the rate  
12 reduction means that residential customers will  
13 receive more of the benefit or rate reduction and  
14 other customer classes would receive less of a share  
15 of that rate reduction, correct?

16 A. Yes.

17 Q. Let's turn back to the Supplemental  
18 Stipulation and let's look at page 10 of Company  
19 Exhibit 3. Are you there, sir?

20 A. Yes.

21 Q. Page 10 is the signature page; is that  
22 correct?

23 A. Yes.

24 Q. And there is an asterisk next to the  
25 signature of the Ohio Consumers' Counsel, correct?

1           A.    Yes.

2           Q.    And at the bottom of the page is a  
3 footnote explaining the asterisk, correct?

4           A.    Yes.

5           Q.    And it states that OCC, along with two  
6 other parties, are not signatory parties to the terms  
7 and conditions of Sections V.B. through V.I. related  
8 to grid modernization, correct?

9           A.    Yes.

10          Q.    So even though OCC agreed not to oppose  
11 these provisions, it's your understanding that OCC is  
12 not a signatory party with regard to those  
13 provisions, correct?

14               MS. O'BRIEN:  Objection, asked and  
15 answered.

16               EXAMINER ADDISON:  I'll allow the  
17 question.

18          A.    I think the footnote speaks for itself.

19          Q.    You believe it was your intention to add  
20 a footnote in order to exclude OCC's signatory party  
21 status from those specific provisions; is that fair?

22               MS. O'BRIEN:  Again objection.  Asked and  
23 answered.  He just testified that the footnote speaks  
24 for itself.

25               EXAMINER ADDISON:  Overruled.

1           A.    We signed on for the tax benefits.  We  
2   are not opposing the grid modernization portion of  
3   the Stipulation.

4           Q.    And specifically on page 6, line 1 of  
5   your testimony, you specifically state that OCC is  
6   not agreeing to FirstEnergy's proposal to spend  
7   \$516 million in grid upgrades, correct?

8           A.    Yes.

9           MS. BOJKO:  Thank you, your Honor.  I  
10   have no further questions.

11           EXAMINER ADDISON:  Thank you, Ms. Bojko.

12           MS. BOJKO:  Ten minutes, for the record.

13           EXAMINER ADDISON:  That is on the record,  
14   so.

15           Ms. Fleisher.

16           MS. FLEISHER:  Yes, your Honor.  Thank  
17   you.

18                                 - - -

19                                 CROSS-EXAMINATION

20   By Ms. Fleisher:

21           Q.    Mr. Willis, can you turn to your  
22   testimony, page 5, lines 21 to 22.  And here you  
23   refer to the need for "adequate regulatory reviews to  
24   ensure that the benefits exceed the costs to  
25   customers" for electric grid upgrades.  Can you

1 describe your understanding of the regulatory reviews  
2 provided for in the Stipulation and Supplemental  
3 Stipulation?

4 A. Yeah, as I state on page 6, the  
5 supplemental settlement establishes criteria on which  
6 regulatory review can occur to determine if the  
7 investments in and charges for grid modernization are  
8 used and useful for consumers and if the costs were  
9 prudently incurred.

10 Q. Okay. And do you believe those standards  
11 would require FirstEnergy to deliver all the benefits  
12 projected in the cost/benefit analysis?

13 A. I believe that would be up to the auditor  
14 to determine whether that would fall under the  
15 prudence review, if there -- if the benefits  
16 outweighed the costs, certainly that would be  
17 prudent, but if the costs outweighed the benefits,  
18 that may be -- that may fall into the prudence  
19 review.

20 Q. Okay. And on page 9 of your testimony,  
21 line 6. And here you're describing what the  
22 Commission set forward in the PowerForward Roadmap,  
23 correct?

24 A. Yes.

25 Q. Okay. That -- and your understanding of

1 the PowerForward Roadmap is that there should be  
2 "assurances that performance metrics are actually  
3 achieved," correct?

4 A. Yes.

5 Q. And can you identify what Stipulation  
6 provisions or other applicable authorities provide  
7 assurances that performance metrics are actually  
8 achieved for Grid Mod I?

9 THE WITNESS: Could I have the question  
10 reread, please.

11 EXAMINER ADDISON: You may.

12 (Record read.)

13 A. No.

14 Q. And you're familiar with the performance  
15 metrics set out in Attachment C, correct?

16 A. Yes.

17 Q. And to your understanding, do those  
18 include any quantitative or qualitative targets for  
19 those metrics?

20 A. I don't know. My testimony here is,  
21 again, we're not supporting -- we're not opposing the  
22 grid modernization of the Stipulation.

23 Q. And can you go to the Supplemental  
24 Stipulation, to the infamous footnote on page 10.  
25 And apologies if I'm overlapping with Ms. Bojko's

1 questions, but does this footnote mean that OCC does  
2 not -- has not signed on to the cost/benefit analysis  
3 for the Grid Mod I?

4 A. We are not opposing.

5 Q. Okay. Did OCC retain an expert to  
6 analyze Attachment B to the Stipulation and the  
7 underlying cost/benefit analysis?

8 A. We retained consultants. I'm not really  
9 sure if they looked at the cost/benefit analysis. I  
10 believe that they did.

11 Q. Okay. Does OCC have any basis to believe  
12 that Grid Mod I is likely to deliver the benefits  
13 projected in Attachment B?

14 A. I have no opinion.

15 Q. And is it fair to say that if not for the  
16 tax benefits provided in the Supplemental  
17 Stipulation, OCC would not have signed on?

18 A. That's correct.

19 MS. FLEISHER: That's all, your Honor.  
20 Thank you.

21 EXAMINER ADDISON: Thank you.

22 Mr. Royer.

23 MR. ROYER: No questions.

24 EXAMINER ADDISON: Thank you.

25 Any redirect?

1 MS. O'BRIEN: No, your Honor. And --

2 EXAMINER ADDISON: Mr. Willis, thank you  
3 very much. We don't have any additional questions.  
4 You're excused.

5 Please proceed.

6 MS. O'BRIEN: With that, I would like to  
7 move admission of OCC Exhibit 1.

8 EXAMINER ADDISON: Is there any objection  
9 to OCC Exhibit 1?

10 Hearing none, it will be admitted.

11 (EXHIBIT ADMITTED INTO EVIDENCE.)

12 EXAMINER ADDISON: Let's go ahead and go  
13 off the record for a moment.

14 (Discussion off the record.)

15 EXAMINER ADDISON: Let's go back on the  
16 record.

17 After a brief discussion off the record  
18 with the parties, we have decided that initial briefs  
19 will be due March 1st, with reply briefs being due  
20 March 12th.

21 Anything else before we adjourn?

22 All right. Thank you, all. We are  
23 adjourned.

24 (Thereupon, at 11:54 a.m., the hearing  
25 was adjourned.)

CERTIFICATE

I do hereby certify that the foregoing is a true and correct transcript of the proceedings taken by me in this matter on Wednesday, February 6, 2019, and carefully compared with my original stenographic notes.

\_\_\_\_\_  
Karen Sue Gibson, Registered  
Merit Reporter.

\_\_\_\_\_  
Carolyn M. Burke, Registered  
Professional Reporter.

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Summary: Transcript in the matter of the Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company hearing held on 02/06/19 - Volume II electronically filed by Mr. Ken Spencer on behalf of Armstrong & Okey, Inc. and Gibson, Karen Sue Mrs.