IN THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Ohio Edison: Company, The Cleveland : Electric Illuminating Company, and The Toledo :

Edison Company for : Case No. 14-1297-EL-SSO

Authority to Provide for : a Standard Service Offer : Pursuant to R.C. 4928.143: in the Form of an Electric: Security Plan.

DEPOSITION

of Sarah Murley, taken before me, Karen Sue Gibson, a Notary Public in and for the State of Ohio, at the offices of FirstEnergy Corporation, 76 South Main Street, Akron, Ohio, on Wednesday, January 14, 2015, at 8 a.m.

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2 1 **APPEARANCES:** 2. FirstEnergy Corp. By Ms. Carrie M. Dunn 3 76 South Main Street Akron, Ohio 44308 4 Calfee, Halter & Griswold LLP 5 By Mr. N. Trevor Alexander The Calfee Building 6 1405 East Sixth Street Cleveland, Ohio 44114 7 On behalf of the Applicants. 8 Bruce E. Weston, Ohio Consumers' Counsel By Ms. Maureen R. Grady (via speakerphone) 9 Assistant Consumers' Counsel 10 10 West Broad Street, Suite 1800 Columbus, Ohio 43215-3485 11 On behalf of the Residential Consumers of Ohio Edison Company, The Cleveland 12 Electric Illuminating Company, and The 13 Toledo Edison Company. 14 Earthjustice By Mr. Shannon Fisk Northeast Office 15 1617 John F. Kennedy Boulevard, Suite 1675 Philadelphia, Pennsylvania 19103 16 17 Earthjustice By Mr. Michael Soules 18 1625 Massachusetts Avenue NW, Suite 702 Washington, D.C. 20036 19 On behalf of the Sierra Club. 20 Ohio Partners for Affordable Energy 21 By Ms. Colleen Mooney(via speakerphone) 231 West Lima Street 2.2 Findlay, Ohio 45846 2.3 On behalf of the Ohio Partners for Affordable Energy. 24

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17	On behalf of the Environmental Law &	
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19	Bricker & Eckler, LLP By Mr. Dylan Borchers 100 South Third Street	
20	Columbus, Ohio 43215	
21	On behalf of the Northeast Ohio Public Energy Council.	
22	ALSO PRESENT:	
23	Mr. William Allen, AEP Ohio (via speakerphone).	
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5 Wednesday Morning Session, 1 January 14, 2015. 2 3 4 (Witness sworn.) 5 MR. ALEXANDER: Good morning. My name is 6 Trevor Alexander. I am one of the lawyers 7 representing the companies in this case. 8 Could everyone appearing via telephone this morning please identify themselves. 9 MR. PETRICOFF: This is Howard Petricoff 10 and I am here representing the Retail Energy Supply 11 12 Association, the Electric Power Supply Association, 13 and P3. MR. DARR: Frank Darr on behalf of the 14 15 Industrial Energy Users of Ohio. 16 MS. HUSSEY: Rebecca Hussey on behalf of 17 Ohio Manufacturers' Association Energy Group. 18 MS. GRADY: Maureen Grady on behalf of the industrial customers of FirstEnergy. 19 20 MS. MOONEY: Colleen Mooney on behalf of 21 OPAE. 2.2 MR. BORCHERS: Dylan Borchers on behalf

MR. FISK: This is Shannon Fisk on behalf

Northeast Ohio Public Energy Council.

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Sarah Murley

6 of Sierra Club. 1 2 MR. SOULES: Michael Soules on behalf of 3 Sierra Club. MS. DUNN: Carrie Dunn on behalf of the 4 5 Ohio Edison Company, The Cleveland Electric 6 Illuminating Company, and The Toledo Edison Company. 7 8 SARAH MURLEY being by me first duly sworn, as hereinafter 9 certified, deposes and says as follows: 10 11 CROSS-EXAMINATION 12 By Mr. Fisk: 13 Q. Good morning, Ms. Murley. Good morning. 14 Α. How are you today? 15 Q. Good, thank you. 16 Α. 17 Could you just please state your name for Q. 18 the record. 19 Α. Sarah Murley. 20 Okay. And what is your business address? Q. 21 11209 North Tatum Boulevard, Suite 225, Α. 2.2 Phoenix, Arizona 85028. 2.3 Q. Okay. And who is your employer? Applied Economics LLC. 24 Α.

- Q. Okay. And what is your title there?
- A. Principal.

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- Q. Principal, okay. And have you ever been deposed before?
 - A. No.
- Q. And as a principal in Applied Economics, what -- what does that job position involve?
- A. I'm involved in marketing and managing staff and oftentimes working on projects on my own. I put together contracts for the projects that I am working on, and I am involved in billing for those projects.
- Q. Okay, okay. And does anyone report to you?
- A. Yes. I have two employees that report to me directly and two others that indirectly report to me.
- Q. Okay, okay. Great. And who do you report to?
 - A. I don't report to anyone.
- Q. Wow. Lucky. And with regards to this proceeding today, did anyone at Applied Economics work with you on this case?
- A. No, just me.

- Q. Just you, okay. Okay. And have you ever filed written testimony in a Public Utilities

 Commission proceeding before?
 - A. Other than this, no.
- 5 Q. Other than this, okay. And how about in 6 any court proceeding?
 - A. No.

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- 8 Q. No, okay. And have you ever testified in 9 a hearing before?
- 10 A. No.
- 11 Q. Okay. When did you first become involved in this proceeding?
- 13 A. In July of 2014.
- Q. Okay. And do you recall how you became involved?
- 16 A. I was contacted by Sharon Noewer.
- Q. And do you know who she is?
- A. Could you clarify that?
- Q. Like does she -- do you know who she works for or?
- A. I know that she works under the umbrella of FirstEnergy.
- Q. Okay, okay. And what -- when she contacted you, what was the communication?

- A. She wanted me to draft the reports that are in my testimony.
- Q. Okay, okay. And did she give you any instructions about those reports?
 - A. She asked me what data I would need.
 - Q. Okay. Any other instructions?
- A. I don't recall that she gave me any other specific instructions.
- Q. Okay, okay. And have you spoken with anyone else at FirstEnergy regarding this proceeding?
 - A. I have spoken with Scott Casto.
 - Q. Anyone else?
- A. I have corresponded with Jim Burk.
 - Q. Okay. And anyone else besides that?
- 15 A. I have had communications with Mark 16 Hayden.
- Q. Okay. Anyone else?
- A. Well, Trevor but he's not FirstEnergy so.
- 19 Q. Anyone else besides that?
- 20 A. Not that I recall.
- Q. Okay. And do you know, have you spoken with anyone who is employed by Cleveland Electric
- 23 | Illuminating?

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A. Not that I recall.

1 And how about have you spoken with anyone Ο. 2. who is employed by Ohio Edison? 3 Α. Not that I recall. 4 0. Okay. And how about Toledo Edison? 5 Α. Not that I recall. 6 MR. FISK: Okay. Mark this as Exhibit 1 7 and this is labeled confidential but I am not going 8 to ask about rates so let me know if there is anything else that's confidential. If we can mark 9 10 this as Exhibit 1. 11 (EXHIBIT MARKED FOR IDENTIFICATION.) 12 So you have been handed a document Q. labeled Confidential Exhibit 1; is that correct? 13 Α. Correct. 14 Okay. And this is the Attachment 1 to 15 Ο. 16 the company's response to Sierra Club Set 7-RPD-109. 17 Does that appear to be correct? 18 Α. Uh-huh. Okay. And is this a copy of the contract 19 0. 20 between Applied Economics and FirstEnergy Service 21 Company --2.2 Α. Yes. 2.3 Q. Okay. Covering your work in this

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proceeding?

A. Yes.

- Q. Okay. Great. Okay. And so to your knowledge, this contract is not with any of the companies who are applicants in this proceeding, correct?
 - A. Correct.
- Q. Okay. And if you could look at the first bullet point, it says "The original W.H. Sammis impact report." Do you see that?
 - A. Uh-huh.
 - Q. And it references a June, 2014, report.
 - A. Yes.
- Q. Is that different than the report that you filed here?
- A. The report that I filed in June, 2014, was for a -- that I created, I didn't file it, that I created in June, 2014, was originally completed for a different purpose, and it -- some of the numbers were updated prior to the version that is in my testimony.
 - Q. Okay.
 - A. Those were updated in July.
- Q. Okay. And but did you use the 2000 -
 June, 2014, report in creating your report that you

 filed in this proceeding?

- A. I updated the numbers and rewrote through the report.
- Q. Okay. Do you know if that June, 2014, report has ever been produced to any of the parties in this proceeding?
 - A. I don't know.

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- Q. Okay. Would you say you relied on that report in creating your report in this proceeding?

 MR. ALEXANDER: Objection. She testified she updated all the numbers. Go ahead.
- A. I updated the numbers and changed the text to reflect those updated results.
- Q. Okay. And there's also a report from November, 2014, regarding Davis-Besse; is that correct?
 - A. That's correct.
 - Q. And what was that report done for?
- A. I'm sorry.
 - Q. What was that report done for?
- A. I had previously completed that report for economic development people at FirstEnergy

 Service Company.
- Q. Okay. And do you know what -- how that report was used?

A. No, I don't.

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- Q. Okay. And you say these reports were originally prepared at the request of another entity. What entity?
- A. The economic development department at FirstEnergy Service Company.
- Q. Okay. So the same company as your contract is with, correct?
 - A. Just a different person, yes.
- Q. Different person, okay. And so for this current proceeding you say that you -- you estimate that it would take you five hours to update those two reports; is that correct?
 - A. Uh-huh.
- Q. Okay. So what did you -- what did you do to update them?
- A. So I was provided with different numbers by FirstEnergy that were more current and I ran those through in my model and updated my table and updated the testing to be consistent with those numerical results.
- Q. Okay, okay. And who provided those numbers to you?
 - A. Sharon Noewer.

- Q. Okay. And how were those provided to you?
 - A. Via e-mail.

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- Q. Okay. And what numbers did she provide to you?
 - A. As I included in my testimony on

 Attachment 1 at the end of each report, so on page 11

 of the Sammis report and page 13 of the Davis-Besse
 report.
- Q. Okay. So you're referring to Attachment
 SM-1 and SM-2?
- 12 A. Yes.
- Q. So all of the data on Attachment 1 for Sammis came from FirstEnergy?
- 15 A. That's correct.
- Q. Okay. Was there any other data that came from FirstEnergy?
- A. On the Davis-Besse I was also provided
 with the amount of property tax that they paid in
 20 2014.
 - Q. Okay.
- MR. ALEXANDER: Just to clarify was your question previously related to just Sammis and SM-1?

 MR. FISK: Yes.

A. No. That's all the information I was provided.

Q. And then for Davis-Besse it's page 13 of Attachment SM-2; is that right?

A. Yes, that's correct.

Q. Is there any data besides what is included on Attachment 1 to SM-2 that you were provided by FirstEnergy?

A. I was provided with an estimate of 2014 property taxes paid.

Q. Okay. Which is not included on Attachment 1, correct?

A. Uh-huh.

Q. Any other data?

A. No.

Q. Okay.

19 THE WITNESS: I apologize. Could I have

20 a tissue?

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21 MR. FISK: Let's go off for a second.

22 (Discussion off the record.)

Q. Okay. Going back for a minute to the November, 2013, Davis-Besse report, do you know

what -- what the purpose of that report was?

A. No.

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- Q. Do you -- who -- who at FirstEnergy were you working with on that report?
 - A. Patrick Kelly.
- Q. Patrick Kelly, okay. And when -- it was Mr. Kelly that contacted you about doing that report?
 - A. Yes.
- Q. And he didn't say any reason why he wanted that report?
- A. He did not discuss with me what he was going to do with the report. We talked about what he -- you know, the nature of the report that he needed.
- Q. Okay. And what did he say the nature of the report was he needed?
- A. He needed an economic impact analysis of the operation of the Davis-Besse plant.
- Q. Okay. And how do you -- how do you define an economic impact analysis?
- A. The jobs, direct and indirect, induced jobs, and income and output that are created by the plant. And then we also include the state and local revenue impacts.

- Q. Okay, okay. And with regards to the June, 2014, Sammis report, who at FirstEnergy contacted you about that report?
 - A. Patrick Kelly.
- Q. Patrick Kelly, okay. And did he say what the purpose of that report was?
 - A. No.

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- Q. Okay. And when he contacted you, what did he request in that -- with regards to that report?
- A. An economic impact report of the operations of the Sammis plant.
- Q. Okay. And do you know about how long it took you to create those reports, November -- the June, 2014, November, 2013, reports?
- 16 A. I don't recall exactly how many hours I spent.
 - Q. Okay. More than five?
- 19 A. Yes.
 - Q. Okay. And you said that the data with regards to the reports that you filed in this proceeding came from Sharon Noewer; is that right?
- A. That's correct.
- Q. Okay. Anyone else in FirstEnergy?

- A. Not that I directly had communication with.
 - Q. Okay.

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- A. I don't know where Sharon, you know, got the data.
 - Q. Okay. And did you do anything to verify the accuracy of the data she provided you?
 - A. I did look at profiles of the plants that are available on the FirstEnergy website and the data was to the extent the data matched, you know, that I had similar data, it was consistent with those profiles.
 - Q. Okay. Anything else?
- 14 A. No.
- Q. Okay. And you have not provided any evaluation of the economic impacts of the OVEC plants; is that correct?
- 18 A. I'm sorry. Could you clarify?
- 19 Q. The OVEC plants.
- 20 A. No.
- Q. And do you know what the OVEC plants are?
- 22 A. No.
- Q. Oh, okay. And so do you know, have you ever heard of the Clifty Creek plant?

A. No.

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- 2 Q. Okay. How about Kyger Creek?
- 3 A. No.
 - Q. So you're not offering any testimony regarding those plants, correct?
 - A. That's correct.
 - Q. And besides issues related to the economic impacts analysis of Sammis and Davis-Besse, are you offering any other opinions in this proceeding?
 - A. No.
- 12 Q. So I guess walk me through the process.
- 13 You received various input data from Ms. Noewer.
- What did you do then?
- MR. ALEXANDER: Objection, broad. Go ahead, if you can.
- 17 A. Can you be more specific?
 - Q. Well, what's the -- what's the next step in your analysis once you get the inputs from Ms. Noewer?
 - A. Well, the subject geography is important because the economic multipliers are specific to a particular geography. And so once we determined the geography, I had purchased multiplier data from

IMPLAN and used that to create the multipliers in the economic impact model. And then I selected the appropriate industry categories from the model to use in this analysis. And then I created -- calculated the economic impacts using the multipliers and the input data.

- Q. Anything else?
- A. And then I estimated the revenue impacts that are direct revenues that were provided to me in the case of Sammis, and I estimated the indirect revenues generated by employees.
 - Q. Okay.

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- A. And those were based on information about tax rates and state and local tax structures that I collected as part of my analysis.
 - Q. Okay. Anything else?
- A. I prepared the tables and wrote the analysis.
 - Q. Okay, okay. And did you say the estimated revenue impacts that were provided to you?
 - A. The direct revenues, the property taxes paid by FirstEnergy, were provided to me.
 - Q. Okay, okay. So starting at the top, the geography, you -- had you determined that as part of

- working on the June, 2014, and November, 2013,
 reports?
 A. Yes.
 Q. Okay. So that didn't change in te
 - Q. Okay. So that didn't change in terms of the new --
 - A. It did not. I confirmed with Sharon that was still an appropriate geography.
 - MR. ALEXANDER: Make sure you let him finish the questions.
 - Q. And the multiplier data from IMPLAN, was that -- did you obtain that as part of doing the June, 2014, and November, 2013, reports?
- 13 A. Yes. I had to obtain data to complete those reports.
 - Q. Did you just use the same multiplier data in the report in this proceeding?
 - A. Yes.

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- Q. Okay. And then the industry categories,
 you determined that for the November, 2013, and June,
 20 2014, reports?
- 21 A. Yes.
- Q. And that just stayed the same with regards to the reports in this proceeding?
- A. Yes. There was no reason to change the

- 1 industry categories.
- Q. Okay, okay. And then you said you calculated the impacts --
 - A. Yes.

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- 5 Q. -- from the spending on the plants; is 6 that right?
 - A. I calculated the impacts using the multipliers and using the inputs that I had in Attachment 1.
 - Q. Okay, okay. So for the November, 2013, and June, 2014, reports, you used different inputs.
- 12 A. Yes.
- Q. Okay. All right. And then once you were finished with your analysis what did you do with the results of that?
 - A. I created tables to display the results, and then I wrote up the explanation and the text of the report.
 - Q. Did you discuss your results with anyone before you drafted your report?
 - A. No, not that I recall.
- Q. Okay. And did you -- did you personally draft the reports?
- A. Yes, I did.

- Q. Did you personally draft your testimony?
- A. Yes, I did.

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- Q. Okay. And who did you send the results to once you were done?
 - A. I sent the results to Trevor Alexander.
 - Q. Okay. Anyone else?
 - A. Not that I recall.
 - Q. Okay. Do you recall discussing your results with anyone else?
 - A. No.
 - Q. No? Okay, okay. And if you turn to your testimony page 10, lines 13 to 14, so am I correct that it's your testimony that the total economic impact associated with the Sammis and Davis-Besse plants is \$1.06 billion a year?
 - A. Yes.
- Q. Okay. And is that the -- what geographic scope is that economic impact for?
- A. So that is the combined impacts of those plants on the local areas where they are located.
- Q. Okay. All right. And would that also be the impact on the state of Ohio as a whole?
- A. No, not necessarily. I would estimate -- we did not look at the impacts of Sammis on the state

of Ohio, and so I would certainly expect the impact on the state of Ohio to be greater than the impacts on the six-county region that we looked at.

- Q. Okay. Why would you expect those to be greater?
- A. Because the impacts measure the amount of purchasing that can occur locally based on the types of industries that are present in that local economy and certainly there are more industries and a broader spectrum of industries that are located within the state of Ohio than are specifically located in the six-county area where we were looking at for Sammis.
- Q. Okay, okay. And then you testified that the plants also directly and indirectly support 2,921 jobs?
 - A. Yes.
 - Q. And is that again in the local areas?
- A. Yes.

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- Q. Okay. And so that number does not reflect the overall impact in Ohio as a whole?
- A. Correct, for those two plants combined, yes.
 - Q. Okay. For Davis-Besse you did look at the state of Ohio as a whole.

A. That's correct.

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- Q. And why did you not look for Sammis as the state as a whole?
 - A. When we purchased that analysis, we just didn't discuss needing impacts for the state as a whole.
 - Q. Okay. But you did discuss it for Davis-Besse?
 - A. Uh-huh, yes, that's correct.
 - Q. Okay. And the numbers, that \$1.06
 billion and 2,921 jobs, am I correct that those
 numbers are the combined totals of the Sammis data
 that's provided at the top of page 6 of your
 testimony and the Davis-Besse data that's provided at
 the bottom of page 8?
 - A. Yes.
 - Q. Okay. So if you -- in looking at the top of page 6, the -- the column that says total output --
 - A. Yes.
 - Q. -- that figure and then on page 8 at the bottom, the total output for the state of Ohio, if you add those two together, you get the 1.06 billion?
 - A. Yes.

- Q. Okay. So let's turn to page 6, the data at the top of the page for Sammis. For direct output, what -- there is a figure of \$502.32 million. What does that figure represent?
- A. Output in general represents the value of production.
 - Q. Okay. And what do you mean by that?
- A. It can be defined as wages plus the cost of inputs plus profits.
- Q. Okay. And that -- and for wages, that's just wages of the people actually working in a plant, correct?
- A. Yes.

- Q. The cost of inputs, what would be included in that?
- A. Whatever -- for the subject business whatever types of supplies they have to purchase in order to create their product.
- Q. Okay. So for a coal plant like the coal they burn?
 - A. That would be included.
- Q. Okay, okay. And pollution control sorbents, things like that would be included?
- A. I don't know in detail exactly what

purchases are made by coal plants, by this particular coal plant.

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- Q. Okay, okay. And where did you get the \$502.32 million figure?
- A. I used the IMPLAN multipliers for electric utility generation in this region. Using the personal income information and the multipliers, I was able to estimate direct output.
- Q. Okay. So the cost of inputs to the plant, where did that -- where did those costs come from?
- A. So using the indirect multipliers, it's possible to estimate indirect output and that is representative of local purchases of goods and services.
- Q. Okay. So the indirect multiplier, you are referring to the 1.17 figure that's on line 12 of page 6?
- A. No. That's the total output to

 multiplier so there are separate IMPLAN multipliers

 for direct, indirect, and induced impacts and

 specifically direct, indirect, and induced

 multipliers for output jobs and personal income.
 - Q. Okay.

- A. And those are industry and geographically specific, of course.
 - Q. Okay. So what -- so you have an indirect multiplier.
 - A. Indirect output multiplier.

- Q. Output multiplier. And what are you multiplying that by to get the \$502.32 million figure?
- A. The 502.32 is the direct output. It's not related to the indirect output multiplier.
- Q. Okay. Well, let me take a step back then. How did you calculate the 502.32 million figure?
- A. So all of the multipliers are in terms of direct output, and so if you take the direct personal income multiplier which is dollars of personal income per dollar of output, and you divide by direct personal income, the result is direct output.
- Q. Okay. And the personal income is the \$45.9 million figure?
 - A. That's correct.
- Q. Okay. So you have a 45.9 million figure.

 You put that into IMPLAN?
 - A. I used IMPLAN to create the multipliers

that I used to make this calculation.

- Q. Okay. And then that -- and so then that 49 -- 45.9 million figure, there's a multiplier that then gets you the 502.32 million?
 - A. Yes.

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- Q. So where, for example, does the cost of the coal that's burned in the plant figure into that equation?
- A. So the IMPLAN model includes assumptions about the types of supplies that are purchased by electric power generation facilities and what can be purchased within the specific geographic area that we are looking at. And so I relied on the IMPLAN model and that information about that industry and that geography to estimate the indirect impacts which represent supplier purchases in the local area.
- Q. Okay. So the 502.32 million doesn't -- isn't based on any estimate of actual spending by the plant; is that correct?

MR. ALEXANDER: Objection. Go ahead.

A. It's not specific to data about the Sammis plant specific -- particularly. It is based on IMPLAN estimates for that industry and that geography.

- Q. Okay, okay. And do you know how that how consistent that 502.32 million figure is with actual costs for the Sammis plant?
- A. I did not have information on actual costs for the Sammis plant.
 - Q. Okay. Did you ever ask for it?
 - A. No.

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- Q. Okay. Do you think that would be relevant in determining the economic impact of the Sammis plant with money, actually spending?
 - A. It could be.
 - Q. And why did you not ask for it?
- A. I relied on the IMPLAN assumptions in this case.
 - Q. Okay. Is that what you typically do if you are doing an economic impact analysis?
 - A. It varies depending on the type of industry I am looking at and the types of results that we're looking to create.
 - Q. Okay. Have you ever done an analysis of the Sammis plant that relied on actual data from the Sammis plant rather than --
 - A. Not for the statement -
 MR. ALEXANDER: Objection. Actual data,

are you referring to something beyond the inputs she identified and testified previously?

MR. FISK: Yeah. I am referring to she just testified she didn't use actual data regarding the plant. She used data derived by IMPLAN.

MR. ALEXANDER: She did testify she used some actual data which is the inputs it provided. I think what you are asking her about is the cost data compared to the direct outputs.

MR. FISK: Yes.

 $$\operatorname{MR.\ ALEXANDER:}\ I$$ am just trying to clarify the question.

- Q. So start over. Did you -- have you ever done an analysis of the economic impacts of the Sammis plant that looked at actual cost data for the Sammis plant as opposed to data derived through the IMPLAN model?
 - A. No.

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- Q. Okay, okay. And do you know whether any of the coal used by the Sammis plant comes from outside of Ohio?
- A. I do not know exactly where the coal purchases occur for the Sammis plant.
 - Q. Okay. If there were coal that would

come -- came from outside of Ohio, am I correct that
would -- that spending would not have a direct
benefit to the state of Ohio?

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- A. To the extent the coal was purchased from outside of the state, the actual coal purchase would not have a direct benefit to the state of Ohio. If it was transported, for example, by a transporter within the state of Ohio, that portion of the cost for transporting could benefit the state of Ohio but the coal purchase specifically, no.
- Q. Okay. And do your estimates of the economic impacts of the Sammis plant factor in whether the Sammis plant is burning coal that's being purchased outside of Ohio?
- A. The IMPLAN model makes estimates about how much and what types of purchases can occur in the local area for that particular type of industry, and so we relied on those assumptions.
- Q. Okay. And do you know what those assumptions are with regards to where the coal for the plant comes from?
- A. No, I did not specifically look into that particular factor input.
 - Q. Okay. So you haven't adjusted your

numbers in any way to reflect the actual sourcing of coal at the Sammis plant?

- A. That's correct, because I didn't have specific information on where the coal is sourced.
 - Q. Okay. Did you ever ask for it?
 - A. I don't recall that I did.
- Q. Okay. And assuming you didn't, why did you not ask for it?
- A. Because I believe that the IMPLAN model provides valid assumptions.
- 12 Q. Okay. How long have you worked with the IMPLAN model?
- A. I first began using the IMPLAN model in 1993.
- Q. Okay. And have you used the IMPLAN model
 to evaluate the economic impacts of any coal-fired
 power plant not owned by FirstEnergy?
- MR. ALEXANDER: Could I have that question reread, please.

20 (Record read.)

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- MR. ALEXANDER: Go ahead.
- A. Not that I recall.
- Q. Okay. Have you ever done an economic impact analysis regarding a coal plant not owned by

FirstEnergy?

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- A. Not that I recall.
- Q. Okay, okay. So looking back to page 6, at the top of page 6 of your testimony, you then have a header that says "Indirect Supplier Impacts." Do you see that?
 - A. Yes.
- Q. Okay. And then there is an output figure there of \$50.85 million.
 - A. Yes.
 - Q. And where does that figure come from?
- 12 A. That's based on the indirect output
 13 multipliers.
 - Q. Okay. And am I correct that -- so you take the personal income figure of \$15.82 million and then put it into IMPLAN that has various multipliers and that gets you to 50.85 million?
 - A. No.
 - Q. Okay. How do you do it?
- A. So once you have direct output all of the multipliers are in terms of direct output.
 - Q. Okay.
- A. So there is a multiplier for indirect output per dollar of direct output.

- Q. Okay, okay. So you have your \$502.32 million figure. You have a multiplier that gets you the 50.85 million.
 - A. Correct.
- Q. And then the -- where does the indirect jobs figure come from?
 - A. There is an indirect jobs multiplier for a number of jobs per million dollars of direct output.
 - Q. Okay.

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- 11 A. The number of indirect jobs per million 12 dollars of direct output.
- Q. Okay. And then the personal income under the indirect?
 - A. So there is an indirect personal income multiplier that tells that provides the amount of personal income per dollar of indirect output.
 - Q. Okay.
 - A. I'm sorry, of direct output.
 - Q. Okay. So, once again, the \$15.82 million figure is tied to the 502.32 million?
 - A. That's correct.
- Q. Okay. And do you know what those
 multipliers are? Like there is a specific figure

that you use or?

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- A. I don't have the multipliers memorized.
- Q. Okay.
- A. But, you know, you could divide and infer them.
 - Q. So it's just direct division?
 - A. Multiplication in this case.
 - Q. Multiplication, sure. Okay. So, for example, direct output of 502.32 million leading to indirect output of 50.85 million, so it's approximately a 1 to 10 ratio?
- 12 A. The multiplier would be in the range of .1 something, yes.
 - Q. Okay, okay. Great. Okay. And if you could turn to Attachment GM-1 -- I'm sorry, SM-1, page 5.
- 17 A. Yes.
- 18 Q. Figure 2 it says "Typical Local Supplier
 19 Purchases." Do you see that?
- 20 A. Yes.
- Q. Okay. Those are -- are those the types
 of economic spending that is reflected in the
 indirect output figure?
- A. Yes. And there are other industries.

That's not a comprehensive list.

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- Q. Okay, okay. Certainly. And did you evaluate with regards to these types of purchases what percentage of them -- what percentage of them would be spending outside of Ohio?
- A. By using multipliers for a specific geography, the IMPLAN model's controls for what industries are available and what purchases could be made within that geography, that's the purpose of using geographically specific multipliers. In this case we weren't looking at Ohio. We were looking at a six-county region that actually included counties outside of Ohio.
- Q. Okay. So, for example, legal services,

 IMPLAN includes some assumption about how much legal
 services you could get in this six-county area versus
 elsewhere?
- A. Yes, and how much would be needed by this particular type of industry.
- Q. Okay. And did you do anything to verify whether that was -- those assumptions were consistent with actual practice with regards to the Sammis plant?
- MR. ALEXANDER: Objection. An actual

practice? Answer if you can.

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- A. Could you clarify?
- Q. Okay. Did you do anything to evaluate whether the assumptions in the IMPLAN regarding, for example, legal services are consistent with where legal services for the Sammis plant are -- are actually being obtained?
- A. No. I did not have access to data on where exactly legal purchases -- legal services are purchased by the Sammis plant.
 - Q. Okay. Did you ever ask for that data?
 - A. I don't recall that I did.
 - Q. Okay. And why not?
- A. I felt that it was sufficient to rely on the IMPLAN model for that particular type of assumption.
- Q. Okay. And with regards to any of the purchases identified in Figure 2, did you evaluate whether the IMPLAN model assumptions are consistent with where purchases for the Sammis plant are being made in actual practice?
- A. I did not have data on specifically what types of purchases are made where by the Sammis plant.

Q. Okay. And on Figure 2, coal is listed under Figure 2 as a local indirect output, I guess; is that correct?

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- A. As a typical supplier purchase of a utility generation facility.
- Q. Okay. So I guess I'm interested in I believe we had discussed that coal would also be a factor in the direct output figure; is that correct?
- A. Only in the cost of all inputs are reflected in the value of what's produced.
- Q. Okay. So I guess I am just curious why if there's -- if the value of -- or the cost of the coal is included in the direct output, is the reference to coal being included in the indirect output some other factor or?
- A. I'm sorry. I don't understand the question.
- Q. So the value of the coal is part of calculating the direct output figure, correct?
- A. It's not part of calculating it. It's just that the price of your product includes the cost of labor and the cost of inputs in general.
 - Q. Okay.
 - A. For any -- any operation.

- Q. Okay. And so if one of those inputs were coal, that would be reflected in the direct output figure, correct?
- A. The cost of coal would be part of the overall cost of what you produce.
- Q. Okay. And so then if I'm reading Figure 2 correctly, the cost -- there is some cost to coal that could also be reflected in the indirect outputs; is that correct?
- A. Coal would be one of the indirect outputs that's reflected.
- Q. Okay. And is there -- so what is the difference between reflecting it in the direct output figure and reflecting it in the indirect output figure?
- A. The direct output includes the cost of all factors that go into creating electricity.

 Whether it was purchased locally or not, the final product was produced at that plant.
 - Q. Okay.

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- A. So it's part of the value of that plant.

 To the extent that there are local purchases made of any type, those are reflected in the indirect output.
 - Q. Okay. So -- so that's not -- I guess I

am just wondering how that -- how that doesn't end up double counting the cost of the coal purchases.

- A. So the cost -- the way the economic impacts work the cost of what Sammis produces is -- is reflected in the direct outputs. There are also what becomes sales to other companies, suppliers, and so those are -- those are a part of the value of what you produce, but they are also sales to that other company. This would be the case for any type of operation, not just utilities. And those sales support jobs and income at those other supplier businesses.
- Q. Okay, okay. That makes sense. Okay, okay. And do you know of the indirect output figure of 50.85 million, do you know what portion of that would be purchases of coal?
- A. No, I don't know that without looking it up in the IMPLAN model.
- Q. Okay, okay. And then going back to your -- to the data at the top of page 6 of your testimony, we have induced impacts; is that correct?
 - A. Yes.
 - Q. And what are those?
- A. So --

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1 MR. FISK: Did you want --2 MR. ALEXANDER: Please. There's a 3 question pending. 4 Q. Okay. Why don't you answer that 5 question. 6 MR. ALEXANDER: Could we have the 7 question reread, please. 8 (Record read.) 9 Induced impacts are created by employee 10 spending so the income from the employ -- the direct 11 employees as well as the indirect employees, a 12 portion of that is respent within the local economy 13 on retail and services and other items that households buy and that is what is reflected in the 14 induced impacts. 15 16 Okay. Q. 17 MR. ALEXANDER: Did someone join the 18 call? MS. FLEISHER: Yes. This is Madeline 19 20 Fleisher from EPLC. 21 MR. ALEXANDER: Good morning, Madeline. 2.2 Go ahead. 2.3 Q. Okay. So the -- you have an induced output for Sammis of 32.45 million; is that correct? 24

A. Yes.

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- Q. Okay. And that -- is that figure -- well, ask it the other way, how is that figure derived?
 - A. So there is an induced output multiplier so I take that times the direct output to get induced output.
 - Q. Okay. And then the induced jobs, how is that figure derived?
- A. There is an induced jobs multiplier for the number of jobs per million dollars of direct output.
 - Q. Okay. And then they induce personal impacts?
 - A. The induced personal income impacts are based on an induced personal income multiplier per dollars of direct output.
 - Q. Okay. I am seeing a trend. Okay. And then on lines 11 to 12 of page 6, there is a reference to an output multiplier of 1.17.
 - A. Yes.
 - Q. What is that figure?
- A. So if you took total output of 585.62
 million and derived -- divided by direct output of

502.32 million, you would get 1.17.

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- Q. Okay. So the 1.17 figure is a -- is not an input into the model, correct?
- A. No. I simply used that in the text as a way to explain the outputs.
- Q. Okay, okay. But the other multipliers that we have been talking about that get you from the direct output figure to the indirect and induced, those are inputs into the model or?
- A. Those are multipliers created by the IMPLAN model using the IMPLAN data for this industry in this specific geography.
- Q. Okay, okay. And then at the bottom of page 6, lines 14 to 15, it says "For every direct job retained at Sammis, one additional job is supported at other businesses in the region." Do you see that?
 - A. Yes.
- Q. Okay. So is that a -- is that another multiplier or?
- A. I used the result -- I'm using that as a way to explain the results that was -- that fact is effectively part of the multipliers, but I was not using that as an input. I was using the multipliers, and after I finished the analysis, I went back and --

and drew that conclusion as a way to explain the results.

- Q. Okay. So that's almost like an output rather than an input.
 - A. Yes.

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- Q. Okay. Great. So this approach, I guess, of getting your direct output and then using multipliers to come up with indirect impacts and induced impacts, am I correct that's an approach you've used to calculate the economic impacts of other types of projects, not just a coal plant, correct?
- A. Yes. That is a standard approach for calculating economic impacts.
- Q. Okay, okay. So if the spending for the Sammis plant were instead spent, you know, building a car factory in Cleveland, you could do a similar calculation to determine the economic impacts of that.
 - A. Using different multipliers but, yes.
- Q. Sure, okay, okay. And if you could turn over to page 9 of your testimony, starting on line 8, you say "The resulting output multiplier for the on-going operations of the nuclear power station is

- 1.31 for Ottawa County and 1.50 for the State of Ohio"?
- A. Yes.

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- Q. And the nuclear station being Davis-Besse; is that correct?
 - A. Yes.
 - Q. Okay. And those output multipliers are derived from the data that you are reporting at the bottom of page 8; is that right?
 - A. Yes, that's correct.
 - Q. Okay. And the data at the bottom of page 8, you went through a similar process that we just walked through for the purposes of the Sammis data; is that right?
 - A. That's correct, using different —different IMPLAN data for different geography.
 - Q. Okay, okay. So the IMPLAN multipliers that are used, you start with a general multiplier for the electric power generation industry; is that right?
- MR. ALEXANDER: Could I have that question reread, please.
- 23 (Record read.)
- MR. ALEXANDER: Objection. Go ahead.

A. No.

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- Q. Okay. So on let's say line 4 on page 9, you say "Multipliers for the electric power generation industry were used to estimate direct output." What are you referring there to the multipliers for the industry?
- A. So I am referring to the multipliers for that industry in Ottawa County or Ohio, depending on which results you are looking at, so when you use IMPLAN software, you also must purchase data for a specific geography and use the IMPLAN software to process that data for that geography and that data includes multipliers for all industries present in that geography.

And so once you've created those multipliers, then you need to select out the relevant industries. But the geographic specificity is part of buying the data for that specific geographic area.

- Q. Okay. That makes sense. And who do you buy the IMPLAN data from?
 - A. IMPLAN.
 - Q. Okay. IMPLAN is just a company?
 - A. Yes, it is.
- Q. Okay. Is it -- do you know, is it a

government agency or is it a private company or?

- A. It's a private company.
- Q. Private company, okay. And the -- the resulting output multipliers for Davis-Besse that are identified on lines 8 to 9 of page 9 of your testimony, those multipliers are higher than the ones for Sammis, correct?
 - A. Correct.

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- Q. Okay. So does that mean that, you know, a dollar of spending on Davis-Besse creates more economic output than a dollar of spending at Sammis?
- A. A dollar of spending on Davis-Besse creates more economic output within that local geography, not necessarily in general everywhere but within that local geography, than a dollar of spending creates within the specific geography that we chose for the Sammis analysis.
- Q. Okay, okay. But we don't know whether the dollar spending on Davis-Besse creates greater impacts for the state of Ohio as a whole than it would for Sammis?
- A. We don't know that because we didn't look at the Ohio impacts for Sammis.
 - Q. Okay, okay. And then for lines 12

through 14 on page 9, you say that "for every direct job retained at Davis-Besse, an additional 1.4 jobs are supported at other businesses in Ottawa County," correct?

- A. Yes.
- Q. That figure is also higher than for Sammis, correct?
- A. I didn't use that exact measure for Sammis, I don't believe.
 - Q. Lines 14 to 15 on page 6.
- A. Okay.

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- MR. ALEXANDER: Are you referring to the county-specific number or six-county number?
 - MR. FISK: I am referring to the direct jobs retained at Sammis versus the direct jobs referred to on lines 12 and 13 of page 9 for Davis-Besse.
 - A. The -- so for every one direct job at Sammis, one additional direct job is supported at other businesses in the region. And for every direct job at Davis-Besse, an additional 1.4 jobs are supported at other businesses in Ohio -- in Ottawa County; so, yes, the jobs multiplier is higher for Davis-Besse within that local area.

- Q. Okay, okay. And then the 1 point -- for Davis-Besse you also referred to 1.7 jobs in businesses throughout the state of Ohio, correct, for every --
 - A. Correct.

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- Q. For every one job?
- A. Uh-huh.
- Q. And you -- you did not calculate the similar number with regards to Sammis for the state of Ohio as a whole, correct?
 - A. Correct.
- Q. Okay. If you look at Attachment SM-1, Figure 3, on page 6, this is -- this figure is labeled "W.H. Sammis Employees by County of Residence"; is that correct?
 - A. Yes.
 - Q. Okay. And doing the math here, it appears about 17 percent of the employees for Sammis are located in West Virginia or Pennsylvania; is that correct?
 - A. Yes.
 - Q. Okay. So if you were evaluating the economic impacts of Sammis for Ohio, would you reduce the numbers that you had calculated by approximately

- 17 percent to reflect that those employees are located out of state?
- 3 MR. ALEXANDER: Which numbers?
- 4 MR. FISK: The numbers reported on
- 5 page -- on the top of page 6 of your testimony.
- 6 MR. ALEXANDER: Objection. The numbers
 7 at the top of page 6 relate to the six-county region.
 - Q. Right. And I am asking which portion of those -- if you wanted to calculate just the benefits to Ohio.
 - A. So Figure 3 shows where the employees live --
 - Q. Right.

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- A. -- which has no relationship to where a supplier's purchases are made.
 - Q. Okay.
- A. It may or may not dictate where those employees spend their income, where they shop. So, no, if I were just looking at the impacts of these specific counties in Ohio, the multipliers would be different, but I would not expect that they would be 17 percent. How they would impact the indirect impacts is depends on the specific suppliers that are located in those counties which I don't know off

the top of my head.

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- Q. Okay, okay. So you would have to do a different model run essentially to look at just the Ohio counties?
 - A. That's correct.
- Q. Okay. So the data you've presented at the top of page 6 with regards to indirect supplier impacts can't be used to determine what the indirect economic impacts for Ohio are for the Sammis plant, correct?
 - A. That's correct.
- Q. Okay. For the induced impacts, that represents employee spending, correct?
 - A. That's correct.
- Q. Okay. Would it be fair to assume that given that 17 percent of the employees live in West Virginia or Pennsylvania, at least some of that some of the \$32.45 million of induced output would be in states other than Ohio?
- A. At least some of it but how much is unclear because where you live and where you shop isn't always the same.
- Q. Okay, okay. So you would have to do a new -- a new modeling run to determine how much of

the induced impacts is actually beneficial to counties in Ohio versus other states; is that right?

- A. That's correct.
- Q. Okay. The economic impacts of the Davis-Besse and Sammis plants, you would expect them to continue if those plants continue operating; is that right?
 - A. Yes.

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- Q. Okay. And those -- those impacts would cease only if those plants were to be retired, right?
- A. Certainly the impacts could change over time depending on the level of operations, but if the plants were to close all together, then I would expect the operations impact to go away.
- Q. Okay. And do you know if the Commission were to deny FirstEnergy's application in this proceeding, do you know, would the plants close?
- A. I did not evaluate whether the plants would close in that case.
- Q. Okay, okay. So you are not offering any opinion as to whether they would close.
 - A. I'm not offering an opinion on that.
 - Q. Okay.
 - MR. ALEXANDER: Could you speak up,

please.

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- A. I'm sorry. I am not offering an opinion on that.
 - Q. Did anybody at FirstEnergy tell you it would close --
 - A. No.
 - Q. Okay. -- if this application were denied?
 - A. No.
- MR. ALEXANDER: Could we have the question redone?
 - Q. Did anyone at FirstEnergy tell you the plants would close if the application were denied?
 - A. No.
 - Q. If the plants were to -- strike that.
- 16 If other spending were needed to allow 17 for the retirement of, say, the Davis-Besse plant, 18 would you agree that such spending would -- would 19 lead to some economic impacts?
 - A. Are you referring to decommissioning?
 - O. Yes.
 - A. Decommissioning typically does create temporary impacts after a nuclear plant is closed.
 - Q. Okay. Temporary being because it only

occurs for a set period of time; is that right?

- A. That's correct.
- Q. Okay. So as long as that spending for decommissioning is occurring, you are going to get some economic benefit?
- A. That's correct. It may be -- I would expect it would be less than the operations of the plant but.
- Q. Okay. And so along those lines, is that similar to in your testimony I believe you talk about a specific project that occurred at the Davis-Besse plant; is that right?
 - A. Yes.

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- Q. Okay. I believe it's the -- discussed on page 6 of your Attachment SM-2, the steam generator placement and refueling impacts?
 - A. Yes.
- Q. Okay. And so that was a one-time project that you estimated at one time impacts would be of that.
 - A. Correct.
- Q. And so you can do a similar analysis looking at decommissioning costs?
- 24 A. Yes.

- Q. Okay. But you did not do that, right?
- A. That's correct.

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- Q. And none of the numbers that you have provided regarding the impacts of continued operation of Davis-Besse factors in any economic impacts of decommissioning, correct?
 - A. That's correct.
- Q. Okay. Do you know -- and do you know, would there be decommissioning costs for the Sammis plant if it were to retire?
- A. I don't know what is involved in closing a coal plant.
 - Q. Okay. But, similarly, if there were decommissioning costs for closing Sammis, there would be some economic benefit from that?
 - A. That's correct.
- Q. Okay. And you did not evaluate that, correct?
 - A. That's correct.
 - Q. Okay. And do you know the decommissioning of the Davis-Besse plant, is that -- are you aware as to whether there is a Decommissioning Trust Fund from which such decommissioning would be financed?

MR. ALEXANDER: Objection, beyond the scope of her testimony. Go ahead.

> Α. I am not aware of that.

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- Q. Okay. Are you aware as to whether -- if the Davis-Besse plant were to retire, whether there would be any transmission grid upgrades needed to allow for such retirement?
 - I did not look at that in my analysis.
- Ο. Okay. Are you aware of whether such upgrades could be needed?
 - Α. I'm not aware.
- Okay. If there were spending on Q. transmission grid upgrades, would you agree with me that would also create some economic impact?
 - Α. It would create some economic impact.
- Okay. And you could evaluate that Ο. similar to the process you've done to evaluate the operation of the Sammis plant?
- I could use an economic impact analysis Α. to evaluate that depending on the geography where it occurred.
 - Okay. But you haven't done so, right? Q.
 - That's correct. Α.
 - MR. FISK: We can go off.

(Recess taken.)

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- Q. Okay. So getting back to the question of, you know, if the Davis-Besse or Sammis plants were to retire, would you agree with me if they were to retire, they would presumably be replaced with other energy sources?
- A. I assume that the energy demand would have to be met in some way. I assume that would most likely not occur in the exact same location as where these plants were.
- Q. Sure. Okay, okay. Fair enough. Would you agree that, I mean, if money were spent on other energy resources, that would also have an economic impact?
- A. It would not have an economic impact in the location where these plants were located unless that's where the money was spent.
- Q. Okay. But wherever the money is spent, you know, so if you built a new gas plant, you know, somewhere in Ohio to help replace, say, Davis-Besse, that would generate economic impact, correct?
- A. A new gas plant would generate economic impact in the location where it was.
 - Q. Okay. And that would also provide

benefit to the state as a whole?

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- A. To the extent that other supplier purchases for that plant occurred in other places in Ohio, that would provide potential benefits to those locations.
- Q. Okay. Similar to how Davis-Besse provides according to your -- your testimony provides benefits to not just Ottawa County but also the state of Ohio.
- A. Yes. In what proportion I don't know but, yes, there would presumably be other purchases in Ohio if the plant was located somewhere in Ohio.
- Q. Okay. And that, again, you would have to run that through some sort of IMPLAN model to come up with the specifics?
 - A. That's correct.
 - Q. And you did not look at that, correct?

 MR. ALEXANDER: Look at --
 - A. Correct.
- MR. ALEXANDER: Objection. Look at what? Go ahead, if you can.
 - A. Could you clarify what?
- Q. Sure. You did not look at the potential economic impacts of any sort of replacement

generation if Davis-Besse were to shut down?

A. That's correct.

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- Q. Okay. And you also did not look at any economic impacts of any replacement generation if the Sammis plant were to shut down; is that correct?
 - A. That's correct.
- Q. Okay. And do you know if, for example, the Davis-Besse plant were to shut down, could that create opportunities to redevelop the site where the plant is?
- MR. ALEXANDER: Objection, beyond the scope of her testimony. Go ahead, if you can.
- A. I don't really know having not seen the site what the redevelopment potential would be for that site.
- Q. Okay. Would you agree if it were redevelopment of that site, that would create some economic impact for the local community?

MR. ALEXANDER: Same objection.

- A. It would really depend on how -- what the site was redeveloped with.
- Q. Okay. So you would need -- you would need to have details about what the redevelopment is and that you could then put into the IMPLAN model?

A. That's correct.

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- Q. Okay. So the -- the economic impact that's created by, say, the Sammis plant, would you agree that that does come at cost also?
 - A. Could you clarify what you mean?
- Q. Well, people purchasing electricity have to pay money for it, correct?
- A. Yes, people pay money to purchase electricity.
- Q. And that money is being used to, for example, keep the Sammis plant operating, correct?
- A. I assume that revenues from selling electricity support the generation of electricity.
- Q. Okay. And if that money were not being spent on keeping the Sammis plant -- by buying the power from the Sammis plant, that is money that could be spent elsewhere, correct?
- A. Could you clarify spent elsewhere by whom?
- Q. By the -- by the customers who are paying for the electricity being produced by the Sammis plant.
- A. So if the customers were spending less money on electricity, they would presumably spend

that money on something else but the direct connection to the Sammis plant is $\--$ is unclear to me.

- Q. Okay, okay. Well, so if -- if customers who are currently buying electricity that's produced by the Sammis plant -- and those customers they are located in Cleveland, which is not one of the counties that you have estimated any economic benefits for from Sammis, correct?
 - A. Correct.

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Q. Okay. If those -- if Sammis were retired and replacement power were built in Cleveland, then that -- this money would go to economic development in Cleveland instead, correct?

MR. ALEXANDER: Objection, beyond the scope of her testimony. It would require her to understand the workings of the electric grid distribution systems. Answer, if you can.

- A. I'm not able to answer that question. I didn't analyze that.
- Q. Okay. If -- I believe you said a minute or 2 ago that if people were paying less money for electricity, they would presumably spend that money somewhere else; is that right?

- A. In general as a household.
- Q. Okay.

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- A. Yes, they may reallocate their spending.
- Q. That reallocated spending would also have indirect and induced economic impacts; is that right?
- A. They are spending a certain amount of money. The amount of money they spend, their spendable income, didn't change unless their income changed. How they allocate their spending to utilities or other types of goods and services could generally change the total impact because what you spend your money on matters not. You know, buying pencils and buying legal services doesn't necessarily create an equivalent impact, but beyond that I couldn't really comment how the redistribution of their spending may or may not create an impact.
- Q. Okay. But you would agree that spending on electricity from, say, the Sammis plant, that is money that those ratepayers can't spend somewhere else, correct?
- A. So they are spending money on utilities from wherever it came.
 - Q. Right.
 - A. And if they are spending that money on

utilities, then they are not spending that particular money on some other good or service.

- Q. Okay, okay. So if there were a lower cost way to get power than purchasing it from, say, the Sammis plant, that would free up more money for those customers to spend in other areas of the economy, correct?
- A. If the retail rates for the customers went down because of any reason, that would allow them to reallocate their spending to something else.
- Q. Okay. And so your -- you have not evaluated as part of your testimony in this proceeding whether there is the potential for greater economic development if the money were being spent on -- somewhere else in the economy rather than on, say, power from the Sammis plant, correct?
 - A. Correct.

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MR. ALEXANDER: Objection. What money? Go ahead and answer, if you can.

- A. Can you clarify the money you are talking about?
- Q. The money that the rate -- the customers are paying for power from the Sammis plant, if that money were spent elsewhere, you haven't evaluated

what economic impacts that would have on the state of Ohio, correct?

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- A. That's correct, I have not evaluated that.
- Q. Okay. And do you know the estimated cost to customers of this -- of the proposal that's pending before the Commission in this proceeding?
- A. No, I am not familiar with the estimated costs to customers.
- Q. Okay. If there were a net loss to customers over the next three years from this proposal, would you agree that could have an adverse impact to economic spending in other parts of the economy?
 - MR. ALEXANDER: Objection, vague. Go ahead.
- 17 A. Could you explain -- could you repeat the question first?
- MR. FISK: Sure. Can you read it back.

 (Record read.)
- A. Could you explain what you mean by net loss to customers?
- 23 Q. Sure. So do you -- so the proposal -- the proposed transaction between the companies and

FirstEnergy Solutions is to -- that the customers of the companies -- well, the companies will be purchasing all of the power from the Sammis plant and then that power would then be sold on the marketplace. And if there is a -- if that leads to a profit, then the customers would get that profit; and if that leads to a loss, the customers would pay that loss. Is that --

A. You mean --

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MR. ALEXANDER: Hold on. There is no question pending.

- Q. Is that -- does that fit with your general understanding of the proposal at issue in this proceeding?
- A. Could you be more -- could you explain when you're talking about the gain that the customers receive and what -- and what form do you mean they receive the gain?
- Q. If the revenues from selling the power were more than the costs of buying that power, the customers, my understanding, would receive some sort of a credit through the rider being proposed in this proceeding.
- A. Okay.

- Q. Okay. And would you agree with me that if they receive that credit, that presumably that would create some that would be money they could then spend elsewhere in the economy and that would create some economic benefit, correct?
- A. If they spent the money, this would create an economic impact. If they saved the money, which is a viable possibility, it would not create an economic impact.
- Q. Fair enough. But most of that money would presumably get spent, correct?
- A. I really can't comment on whether people would save the money or spend the money.
- Q. Does any of your -- your analyses in this proceeding assume that employees are going to spend at least some of what they earned, correct?
- A. Yes, employees will spend at least some of what they earned.
- Q. Okay. And so similarly wouldn't it be fair to assume if customers received a credit to the transaction being proposed in this proceeding, they would spend at least some of that?
 - A. I don't know.

MR. ALEXANDER: Objection. It's beyond

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the scope of her testimony. She hasn't done the analysis so answer, if you can.

A. I don't know.

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- Q. So how do you know that employees will spend the money that they earned but you don't know if customers will spend money that they are getting?
- A. I believe that spending the money that you work for to earn is a different assumption than that you received a credit that wasn't part of your normal income that you maybe weren't expecting and how you might choose to spend that.
- Q. Okay. If you receive -- if instead of a credit the power that you have purchased from the Sammis plant leads to a loss, you know, that you get less revenue when you sell it back into the market, would you expect that loss to reduce the amount of spending those customers can make in other areas of the economy?

MR. ALEXANDER: Same objection, beyond the scope of her testimony. Go ahead.

- A. I didn't evaluate that.
- Q. Okay. And you have no opinion on that?
- A. Correct.
 - Q. Okay. Do you know -- do you know what

the phrase opportunity costs means?

A. Yes.

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- Q. Okay. What is that?
- A. If you are giving up, say, activity A to do activity B, there is an opportunity cost to doing activity B because you had an alternative.
- Q. Okay. And your -- would you agree that if you are spending money to purchase power from the Sammis plant, that there is an opportunity cost to that -- those purchases?
- A. Could you define who -- who the subject is?
 - Q. The electric customers.
- A. So how are the electric customers impacted by -- by this -- I mean, they are paying a retail rate for their electricity. Could you explain how they are impacted by this?
- Q. They are paying a retail rate to the electricity and then there's a rider being proposed by which they would pay to purchase all of the power produced by the Sammis plant.
 - A. Uh-huh.
- Q. Would you agree that that -- that money, there is an opportunity cost to that money of

purchasing the power from the Sammis plant?

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MR. ALEXANDER: Objection. She testified she is not familiar with the rider or proposal so this is well beyond the scope of her testimony. Go ahead, if you can.

- A. I didn't look at that. I really can't answer that.
- Q. So you can't tell me if there is an opportunity cost of spending money on purchasing something?

MR. ALEXANDER: Objection. She's testified she is not familiar with the proposal you are asking her about. Go ahead.

- A. I really can't answer that without having done more analysis.
- Q. So does any part of your analysis factor in any opportunity costs at all?
- A. Opportunity costs aren't the subject of my analysis. Household spending is based on typical patterns for people in certain income levels. But I don't -- I don't understand how that relates to opportunity cost.
- Q. Well, all the impact -- all the direct, indirect, and induced impacts of -- that you talk

about in your testimony comes at some cost, correct?

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- A. I don't understand the question.
- Q. Is it free? I mean, is this money -money just falls out of the sky and there is no cost
 to it to generate the direct, indirect, and induced
 impacts that you are talking about from the
 Davis-Besse and Sammis plants?
- A. There's certainly a cost to producing electricity. That's part of what's represented in the wages and the supplier purchases.
- Q. Okay. And that is money that could otherwise be spent elsewhere, correct?
- A. You have to purchase certain supplies to create electricity and in certain proportion, and I don't think you are choosing between things you don't need and things you need. There's certain production functions for electricity.
- Q. Okay. So -- so you can't identify anywhere in your analysis that you considered any opportunity costs, correct?
- A. Correct. Opportunity costs, that concept is not related to economic impacts.
- Q. Okay. We talked earlier about the November, '13, and June, 2014, reports; is that

correct?

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- A. Correct.
- Q. Did you rely on those in any way in your -- the reports that you did for your current testimony?
- A. Some of the text that is not specific to the numerical results may be the same in both sets of reports.
 - Q. Okay. Any other ways you relied on it?
- A. I had set up a general system of models that I could adjust the inputs in and use that structure.
 - Q. Okay. Any other ways?
 - A. Not that I recall.
- Q. Okay. And then all you -- and then so after having set up that general structure and system, you then just simply update those two reports to create what you provided here in this proceeding?
- A. I put in the new numbers and I reran the model and I updated the numbers and then I revised the text in the reports.
- Q. Okay. And I believe you testified earlier you received the inputs for your reports in this proceeding by an e-mail from Sharon Noewer; is

that right?

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- A. That's correct.
- Q. Okay. Did you receive any other written communications from anyone at any of the FirstEnergy companies about your work in this proceeding?
- A. Could you be specific about what time period you're talking about?
- ${\tt Q.}$ From the day you started working on -- on this project.

MR. ALEXANDER: What is this project? What do you mean?

- Q. The work that you did for this proceeding, the day you started doing that, did you receive any other written communications from anybody at FirstEnergy?
 - A. Other than Sharon Noewer?
- Q. Other than the specific e-mail from Sharon Noewer that you have referenced.
 - A. I received multiple e-mails from Sharon.
 - Q. Okay. Any other communications, written?
- A. I am sure there were, but I don't remember exactly.
- Q. And do you know if any of those multiple e-mails from Sharon Noewer were produced in this

1 proceeding?

- 2 Α. I don't recall if they were included in discovery motions. 3
- 4 0. Okay. Do you know if they were 5 requested?
- 6 Α. I don't recall.

7 MR. FISK: Okay. Could you mark this as

8 Exhibit 2.

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(EXHIBIT MARKED FOR IDENTIFICATION.)

- 10 Q. Okay. I have handed you a document 11 marked Exhibit 2; is that correct?
- 12 Α. Yes.
- 13 Ο. Okay. And this is the company's response to Sierra Club Set 7 Interrogatory 134; is that 14 correct? 15
- 16 Α. Yes.
- 17 And you are identified as the witness 18 providing the response on this document; is that correct? 19
- 20 Α. Yes.
- 21 Okay. And do you see the request asks Ο. 2.2 for "identification of all documents relating to your 2.3 testimony including documents, correspondence, or communications exchanged between the Companies and 24

Ms. Murley"? Do you see that?

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- A. I see where that is written.
- Q. And your response does not identify any communications with Ms. Noewer, does it?
- MR. ALEXANDER: Objection. Do you have a definition of the companies?
- 7 MR. SOULES: I do if you want me. Here. 8 That's what we used in all of our.
- MR. FISK: Yes. It says "Term 9 10 FirstEnergy, Applicants, or Companies means the Ohio 11 Edison Company, Cleveland Electric Illuminating 12 Company, Toledo Edison Company including any 13 affiliated companies such as but not limited to FirstEnergy Solutions Corporation, American 14 Transmission Services Corporation and their 15 16 affiliates, predecessors, and interests, employees, 17 and representatives."
 - MR. ALEXANDER: And so you are asking her to not provide a legal opinion as to the objections but to simply state whether this response says what it says.
 - MR. FISK: Well, I am asking her to confirm that she did not identify any written communications with Ms. Noewer in this response.

MR. ALEXANDER: We are willing to stipulate the response is what it is. She is not a lawyer. I am not sure how she can answer with regard to the objections.

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MR. FISK: Well, I am not talking about the objections. I am talking about did she identify any e-mail communications with Ms. Noewer. She provided the response saying that her testimony identifies all facts and data provided by the companies which Ms. Murley considered in creating her testimony.

Q. You did not, however, identify any e-mail communications with Ms. Noewer, correct?

MR. ALEXANDER: There is a work product objection here so that's what I am sensitive to. We are willing to stipulate she did not specifically identify communications with Ms. Noewer including the e-mail she just testified to. Does that resolve your issue?

MR. FISK: So you are claiming an e-mail sending facts is work product?

MR. ALEXANDER: The assumptions were provided, and she identified them both earlier today and in her prefiled written testimony.

MR. FISK: And you are claiming the e-mails from Ms. Noewer that are providing factual inputs are somehow work product?

MR. ALEXANDER: I would have to go back and check those, which I am willing to do with you offline. We're not going to have a discovery dispute in the middle of the deposition. I am certainly willing to have this conversation with you after this, but we are not going to do it now.

MR. FISK: Okay.

- Q. Okay. And with regards to Subsection B, it asks for the identification of all documents received, generated, or relied upon by Ms. Murley. Do you see that?
 - A. I see that.
- Q. Okay. And your written response does not reference or identify the June, 2014, Sammis report or the November, '13, Davis-Besse report, correct?
 - A. It refers to these specific attachments.
- Q. Okay. To your knowledge did those attachments include any of those -- either of those previous reports that you had done?
 - A. I don't know.
- Q. Okay.

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MR. FISK: Can we get 2 minutes?

MR. ALEXANDER: Sure.

(Recess taken.)

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- Q. When you talked in your report about the economic -- the total economic impact associated with the plants, are you essentially -- would it be fair to characterize that as the -- the economic benefits of keeping the plants open?
- A. Could you be specific in where the reference is?
- Q. Sure. On page 10, lines 13 to 14, I think -- am I correct that's where you kind of give the top line summaries of the -- of the economic impact of the plants?
 - A. That is the top line summary.
- Q. So it's the \$1.06 billion each year and the 2,921 jobs, correct?
- A. That is the output on jobs associated with the plants combined.
- Q. Okay. And would you -- would you -- would it be fair to characterize that as your identification of the benefits -- of the economic benefits of keeping the plants open?
- A. Output and jobs are one way to quantify

economic benefits.

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- Q. Okay. And those -- those figures referenced in lines 13 to 14 on page 10, are those the net economic benefit of the plants?
- A. What do you mean by "net economic benefit"?
- Q. Well, the -- the benefits of the plants outweighing -- compared to the costs of the plants.
 - A. This is simply the benefits of the plant.
- Q. Okay. So it's not -- it's not a net benefit calculation, correct?
- MR. ALEXANDER: Could we explain what

 "benefit" means? I'm lost.
- MR. FISK: I gave an explanation she responded to.
- MR. ALEXANDER: Okay. Let's go off for just one moment.
- 18 (Discussion off the record.)
- MR. ALEXANDER: Objection. Define the
 word "benefit." The explanation earlier was
 explaining the term "net" versus the term "benefit"
 so objection to the question as vague.
 - Q. Which you've already answered the question, correct?

80 1 Which question? Α. 2 MR. FISK: Let's go off for a second. 3 MR. ALEXANDER: She did already answer, 4 yeah. 5 (Discussion off the record.) 6 Ο. Okay. So the pending question, I 7 believe, is that your economic -- economic impact 8 estimates of the \$1.06 billion and 2,921 jobs, that does not reflect a net economic benefit from the 9 plants, correct? 10 11 MR. ALEXANDER: Same objection. 12 I'm sorry. I just don't know what you Α. mean by "net economic benefit." 13 Q. Of course. Do you understand what I mean 14 by "economic benefit"? 15 16 What I am showing is the economic impact. Α. 17 Okay. And is that a benefit? Q. 18 Α. The economic impact is positive. I don't know how you define "benefit." 19 20 Okay. Are you showing the net economic Ο. 21 impact or just the economic impact? I'm not familiar with the term "net 2.2 Α. economic impact." 2.3

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Q. How many years have you done economic

analyses?

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2 MR. ALEXANDER: Objection, argumentative. 3 Go ahead.

- A. Over 20.
- Q. Okay. And you have never heard the term "net economic impact."
 - A. Not as related to multiplier impacts.
- Q. Well, if you were going to compare the economic benefits of an activity to the economic costs of an activity, what would you describe that analysis as?

MR. ALEXANDER: Objection once again to the phrase "economic benefit." Are you again identifying it as economic impact?

MR. FISK: Yes.

- A. So could you restate the question?
- Q. The economic -- if you were to compare the economic benefits of an activity with the economic costs of an activity --

MR. ALEXANDER: Objection again to the phrase.

- A. Benefits aren't a technical term.
- Q. Okay. You -- you have calculated an economic impact that is positive for the plants,

correct?

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A. Yes.

Q. And did you include any economic -- strike that.

Is your -- your calculation of economic impact, does it include any negative impacts?

- A. There are not relevant negative economic impacts in this situation. Negative impacts would be related to, say, the loss of an activity.
- Q. Okay. So -- so you just testified a minute ago that the phrase economic benefits isn't a technical term; is that right?
 - A. That's right.
- Q. So if you could turn to page 2 of Exhibit SM-1, page 2. Are you there?
- A. Yes.
- Q. It says "Impact Summary" at the top; is that correct?
 - A. Yes.
- Q. Okay. So the very first line it says

 "The economic benefits shown here depict the on-going operations of the power plant." Do you see that?
 - A. Yes.
 - Q. So do you not know what economic benefits

means?

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- A. It's still not a technical term, but it's a general word that I have used.
 - Q. Okay. So you do know what it means now.
 - A. It is a word that I have used.
- Q. Okay. In fact, in your report in this proceeding you used it.
 - A. Uh-huh.
- Q. Okay. And then in the next paragraph you say "The operations of W.H. Sammis detailed in this analysis provide substantial economic benefits to the region," correct?
 - A. That is what the text says.
- Q. So do you normally use nontechnical phrases in your reports?
- A. Not when I'm referring to specific numbers but when I am introducing a general concept.
 - Q. Okay, okay. So what in your mind is substantial -- what in your mind does economic benefits mean?
- A. Something positive that occurs in the economy.
- Q. Okay. And your -- and would the opposite of that be something negative that occurs in the

economy?

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- A. Sure.
- Q. Okay. And would you -- could we agree that's an economic cost?
 - A. It's a negative economic impact.
- Q. Okay. And do you -- in your mind is there any negative economic impacts of the operation of the Sammis plant?
- A. Given the methodology we use to measure the impacts, no.
- Q. Okay, okay. So, for example, any -- any impacts of pollution from the Sammis plant, would those factor into your analysis at all?
- A. That is outside of the scope of this type of economic impact analysis.

MR. FISK: Okay, okay. That concludes my questions as of now but we are -- we are reserving the right to ask further questions because we believe that the response to SC Set 7 Interrogatory 134 that was Exhibit 2 was incomplete. We have not been provided with any of the e-mails from Ms. Noewer, and we have not been provided with the previous reports that -- from November, '13, and June, 2014, that Ms. Murley said she relied in part upon in this

proceeding. So once we have settled that, which we can do off -- outside of this deposition, we reserve the right on the record to ask further questions.

MR. ALEXANDER: Sure. And for the record I understand you taking that position. I am willing to talk to you about that after the deposition offline, but the companies do not at this point agree to make Ms. Murley available again at a later date, although we are willing to talk about that again after the deposition.

MR. FISK: Okay. Fair enough.

MR. ALEXANDER: So with that,

Mr. Petricoff, would you like to go next?

MR. PETRICOFF: Yes, thank you, Trevor.

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CROSS-EXAMINATION

By Mr. Petricoff:

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- Q. Good morning, Ms. Murley.
- 19 A. Good morning.
 - Q. Can you hear me?
- 21 A. Yes.
- Q. Yeah. That's one of the difficulties of
 a -- of a telephone deposition is sometimes it's hard
 as we lose the visual communication.

I want to start by talking, if you would turn to page 10 of your testimony, and I am looking at lines 13 to 15, and this is where you give the total -- the total economic impact for the plants.

A. Okay. I see that.

- Q. Okay. And I assume that -- that information comes from your -- your attached studies attached to the testimony, 1 and 2; is that correct?
 - A. That's correct.
- Q. Okay. And the studies were basically historic studies. You looked at data that was given to you at -- sometime in 2013, 2014 in order to conduct the studies?
 - A. That's correct.
- Q. Okay. So the figures that we have here are basically based on those those historic figures, this is what the impact is at the time that we look at these variables that we put into the model.
 - A. That's correct.
- Q. All right. So in the year, for example, 2017, the -- the economic impact for the plants may not be the same numbers that we see on page 10, line 13 to 15.

- A. If the employment or payroll or those sorts of things change, the impact would change also.
- Q. Right. And you would expect that over time there would be changes to not only the payrolls but also the purchasing of -- of products and supplies.
 - A. That could change over time.
- Q. Right. And, likewise, the -- the inputs that you bought from Impact, does Impact update their -- their regional inputs on a regular basis?

 MR. ALEXANDER: Objection. Did you mean

12 IMPLAN?

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- Q. I'm sorry, yes, IMPLAN.
- A. Could you restate the question?
- Q. Sure. Let's talk about -- about IMPLAN.

 Why did you use IMPLAN?
 - A. Because I believe it provides a good amount of industry detail as well as local geographic detail.
 - Q. All right. And do they update their -their databases on the -- on geographic economic
 information -- with geographic -- more recent
 geographic -- I'm sorry. Let me start over.

Does IMPLAN regularly update their

- database for geographic economic information?
- A. IMPLAN does issue a new set of local data files each year.
 - Q. Okay. So if you were going to do this report in 2017, you would probably go back to them and get the most current inputs?
 - A. Correct.

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- Q. Okay. Now, if you will turn to page 6 of your -- of your testimony, let's assume now we are looking forward to the year 2017.
 - A. Okay.
- Q. And we're looking at the -- actually before we get that, let me go back and ask a -- an underlying question. On this chart at the top of page 6 of your testimony, under the output, that first number, output \$502 million.
 - A. Yes.
- Q. Do you see that? Okay. My understanding from your testimony earlier today was that was a figure that was derived by using the data you received from the companies on the Sammis plant and and running it through the your model using the the multiplier inputs from IMPLAN; is that correct?

A. Yes.

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- Q. Okay. And basically that output has implicit assumptions in it including the profitability of the Sammis plant.
 - A. Output by definition includes profit.
- Q. Okay. And do you know if the Sammis plant was profitable during the historic period in which you collected the data?
- A. No. I am just giving you the definition of output based on IMPLAN's definition.
- Q. Okay. Well, let's assume that you that you knew or that you had the data. The company supplied you with with the data on on what the profitability was of the Sammis plant and it was it was a loss. Let's say it was a \$500 million loss. How would that affect the output number that's on page 6?
- A. I don't know without analyzing more data than just profits.
- Q. Okay. Well, let's talk about the general trend. If there -- if there -- if the plant could only be run if there was a \$500 million subsidy that was paid by the people in the local community, how would that affect the outcome of your study, all else

being equal?

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- A. I don't know without analyzing that.
- Q. Is it possible that you could end up with negative numbers?

MR. ALEXANDER: Objection to the incomplete hypothetical. Go ahead.

- A. I really don't know without analyzing that.
- Q. Theoretically can you have negative multipliers?
- A. In the case of a plant closure, you could have a negative economic impact, but the multipliers that come out of the IMPLAN model are all positive numbers.
- Q. Well, but if -- if, in fact, the output numbers was a negative number, wouldn't the multipliers be negative?
- A. The multipliers that come out of the IMPLAN model are all positive numbers.
- Q. Okay. So the model that you used could not calculate then the -- the -- the impact to the local region if, in fact, there was a required subsidy that was larger than the output?
 - A. I think an entirely different approach

would be required, and I didn't look at that.

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Q. Okay. That's fair enough. Fair enough.

I've got -- I have just a couple small -- small

questions for you so I can get a better

understanding, I think, of your -- of your testimony.

If you would, turn to page 5, line 17.

And there you use the term a regional -- yeah, on
line 17 talking about the region. What -- what was
the region?

- A. So the region is a six-county region. If you give me a minute, I can find a definition of what that region is. I believe in the report in the Attachment SM-1, page 1, the last sentence in the first paragraph lists those six counties.
- Q. Okay. That's exactly what I was looking for. One other clarification question, on page 6 on line 13, okay, the third word in is "power." This means that for every \$1 million of power produced how did you how did you calculate a million dollars of power? Is that a million dollars' worth of revenue or a million dollars in cost? What is the reference there to a million dollars of power?
 - A. Direct output.
 - Q. Okay. I guess I am asking how did you

quantify the output? Was it the cost of producing, or was it the revenue from it, from producing the power?

- A. In this case I wasn't using specific numbers from the Sammis plant. I estimated direct output using the multipliers and using data on personal income.
- Q. Okay. So this is -- you use this term here just to show a relationship.
- A. Yes, between total output and direct output in the table at the top of that page.

MR. PETRICOFF: Okay. Now, I understand.

Okay. Thank you. That's all the questions that I have.

MR. ALEXANDER: Ms. Fleisher, would you like to go next?

MS. FLEISHER: Sorry. I have like — okay. I can get started. There is going to be coughing a little bit. I am getting over a cold here.

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CROSS-EXAMINATION

23 By Ms. Fleisher:

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Q. Ms. Murley, my name is Madeline Fleisher.

I represent the Environmental Law & Policy Center.

Let me know if you have any trouble hearing me.

A. Okay.

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- Q. I just have a few quick questions for you, I think. I want to confirm my understanding that when you looked at the IMPLAN multipliers for the plants you were analyzing, you did not look at multipliers for any other regions that might also have power plants; is that correct?
- A. I only looked at the data for the specific areas that we analyzed in these two studies.
- Q. And do you have any way of knowing whether multipliers in other regions or for other plants might show a greater economic impact?
- A. They may be greater. They may be lesser. It depends on the amount of supplier businesses of the right type that are located within the specific geographic area that you are looking at.
 - Q. But that was not part of your analysis.
 - A. That's correct.
- Q. And are there -- scratch that. Give me one minute here. Sorry.

And did you consider in terms of impacts profit to the shareholders in FirstEnergy Solutions?

- A. I simply used the multipliers to derive direct output which by definition includes profit, but I did not look at specific components of profit for Sammis.
- Q. I'm not sure I understood that answer.

 So are you saying part of the economic impact you are describing here does include profit to FirstEnergy

 Solutions' shareholders for Sammis --

MR. ALEXANDER: Objection.

Q. -- and Davis-Besse?

- MR. ALEXANDER: Objection, asked and answered. Go ahead.
- A. I don't think I can improve on my previous answer.
 - Q. I guess can you give me a "yes" or "no" as to whether this -- the economic impact you described here includes profit to FirstEnergy Solutions' shareholders?
 - MR. ALEXANDER: Objection. Could you clarify are you asking for direct -- whether direct output includes profits?
- MS. FLEISHER: That economic impact described in Ms. Murley's report.
- 24 MR. ALEXANDER: Is there a reference?

- Q. Maybe it's better to ask this backwards then. Am I correct in understanding that the economic impact in your report does not include profit to FirstEnergy Solutions' shareholders?
- A. I guess I don't understand which specific number you're referring to.
 - Q. Any of the numbers. I mean.
- A. Output by definition includes wages plus supply costs plus profits.
- Q. Okay. And would that profit necessarily be received by shareholders in Ohio?
 - A. I don't know. That is beyond the definition -- detail of the definition here.
 - Q. And do you -- in considering the revenues created by -- the revenue impacts created by these plants, did you consider what portion of FirstEnergy Solutions' revenue that represents?
- 18 A. So --

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- MR. ALEXANDER: Could I have that question reread, please.
- 21 (Record read.)
- MR. ALEXANDER: Objection to form. Go
 ahead.
- A. So could you give me a reference in the

document as to where you are looking at?

- Q. Sure. Give me one second. I'm looking at page -- well, I guess just to pick out one plant but per Davis-Besse on page 8.
 - A. Of the testimony or the report?
 - Q. Sorry of the testimony.
 - A. Okay. Hang on.
- Q. Looking at the table at the bottom, and just repeat the question, did you look at how those impacts compare to any of the -- any other plants run by FirstEnergy Solutions?
- 12 A. Well, of course, we have the Sammis

 13 implant -- Sammis impacts but otherwise not any other

 14 plants beside Sammis and Davis-Besse.
- MS. FLEISHER: Okay. All right. That's it. Thank you.
- MR. ALEXANDER: Thank you. At this point let's go off the record and take a break.
- 19 (Recess taken.)
- 20 MR. ALEXANDER: Let's go back on the record. Ms. Hussey, would you like to go?
- MS. HUSSEY: I would. Thank you very
- 23 much.

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CROSS-EXAMINATION

3 By Ms. Hussey:

- Q. Hi, Ms. Murley.
- A. Yes. Hi.
- Q. I wonder if you could turn to page 1 of your testimony.
 - A. Okay.
- Q. And beginning at line 17, you testify that you performed many custom studies to quantify economic and physical impacts of utility generation facilities, and then in parentheses you list traditional and solar.
 - A. Yes.
 - Q. What do you mean by "traditional"?
- 16 A. Something other than solar.
- MR. ALEXANDER: Did someone just join the
- 18 call?
- MR. DARR: Yes. This is Frank Darr. I just returned.
- MR. ALEXANDER: Okay. Thank you.
- 22 A. Such as coal or nuclear or natural gas.
- Q. Okay. Thank you. And I believe you spoke with Mr. Fisk a bit about your coal electric

1 generation plants and economic analyses. For the 2 sake of clarification, have you previously conducted 3 economic impact analysis for a coal-generation 4 facility? Other than Sammis? 5 Α. 6

Yes, other than Sammis. 0.

No, not a coal-generation facility. Α.

Okay. What about a nuclear-generation Q. facility?

Α. Yes.

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Okay. And are you able to tell us what Q. the facility may have been?

> Α. I'm sorry, can you repeat that?

Q. Are you able to tell us what facility that was?

> Α. Palo Verde nuclear plant.

Okay. Any other nuclear plants? Q.

Α. Other than Davis-Besse, no.

Q. Okay. Great. And what about natural gas-generation facilities?

> Α. What's the question?

What about natural gas-generation Q. facilities, electric generation facilities?

> Α. Do you mean -- what are you -- could you

repeat the question?

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Q. Combined cycle type of a plant.

MR. ALEXANDER: Is the question has she done an economic impact analysis for a natural gas facility?

MS. HUSSEY: Correct.

- A. Yes.
- Q. Okay. And how many such analyses have you performed?
 - A. For natural gas?
 - Q. Yes.
- A. Two.
- Q. And what about renewables, have you performed economic impact analysis for renewable generation?
 - A. For solar, yes.
 - Q. Okay. Any others?
 - A. Not that I recall.
- Q. Thank you. And when you are asked to perform an economic impact analysis, do you always use the IMPLAN model?
 - A. Yes, I do.
- Q. Okay. You explained a bit about how
 IMPLAN can take industry-specific information into

account earlier.

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- A. Yes.
- Q. And I wondered what -- what category of industry-specific information you obtained from IMPLAN when conducting the study.
- A. Do you mean which industry category in IMPLAN I used?
 - O. Correct.
- A. Electric power generation is a category in IMPLAN. I believe that it may not be the exact name but.
- Q. Okay. And do you happen to know if IMPLAN breaks that information down into categories of electric generation, or is it all within the same umbrella?
- A. In the IMPLAN model I used all types of electric generation are included in a single industry category.
- Q. Okay. Thank you. If I could talk to you a bit about regional impacts. It appears that under your analysis for Sammis you considered the impact on a six-county regional area. And then for Davis-Besse you regionally looked only at Ottawa County, and I wondered why the regions that you analyzed for those

two plants were different. Would the scope -- it appears to be the scope was larger for Sammis than it was for Davis-Besse.

- A. The geographic area covered by the six counties is probably larger than the single area of Ottawa County.
- Q. Correct. And is there a reason that you selected a larger geographic region for the Sammis plant, for your analysis of the Sammis plant, than for Davis-Besse?
- A. The region for the Sammis plant was primarily based on where the employees lived.
- Q. Okay. And for Davis-Besse, did you decide just to isolate it to Ottawa County because of the location specifically?
 - A. Yes.

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- Q. Okay. And did you make the determination of what regional geographics to look at, or was that something that was asked of you by FirstEnergy?
- A. I presented my ideas about what geography we should look at to FirstEnergy and they agreed.
- Q. Okay. So developing this six-county area for Sammis, you took the impact in the counties where the individuals that work at Sammis live; is that

correct?

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- A. That was how I selected the area.
- Q. Okay. And are all those counties contiguous to Jefferson County where Sammis is located?
 - A. I don't know without looking at a map.
- Q. You said that you typically use the IMPLAN model when asked to perform an economic impact analysis. Are you familiar with any criticisms of the IMPLAN model?
- A. I'm familiar with how the IMPLAN model differs from certain other models like REMI.
- Q. Okay. And can you explain that?

 MR. ALEXANDER: Objection, overbroad. Go
- Q. Can you explain the differences -- my apologies. Can you explain the differences between IMPLAN and REMI and the sort of inputs that they examine?
- A. With regard to the inputs that they examine, do you mean the inputs that would be required to do an analysis?
 - Q. Sure.
 - A. Those aren't really different. It's the

underlying structure of the models that is different.

Q. Okay. And would you consider an IMPLAN -- IMPLAN to be a more specific model, or would REMI in your estimation be a more specific model?

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- A. What do you mean by specific?
- Q. In terms of specific results, yielding specific results.
 - A. Specific to what? I'm sorry.
- Q. The economic impact of the -- whatever plant you're looking at or whatever other -- the impetus would be for the analysis.
- A. Both models yield results in terms of the same variables, jobs, income, output, value added which I didn't include here.
- Q. Okay. So did you consider using any model other than IMPLAN for the economic impact analysis for both Sammis and Davis-Besse?
- A. No. I generally use the IMPLAN model because that is the model with which I have expertise.
- Q. Okay. And FirstEnergy did not ask you to use any specific type of model? That was your decision?

Sarah Murley 104 Α. 1 Correct. 2 MS. HUSSEY: Okay. Those are all my 3 questions. Thank you very much. 4 MR. ALEXANDER: Did someone just join the 5 call? 6 MR. ALLEN: This is Bill Allen with AEP 7 Ohio. 8 MR. ALEXANDER: Good morning, Bill. Ms. Grady, would you like to go next? 9 MS. GRADY: Yes. That would be great. 10 11 12 CROSS-EXAMINATION 13 By Ms. Grady: 14 Ο. Good morning, Ms. Murley. 15 Α. Good morning. 16 I'm going to probably jump around a bit. Ο. 17 We'll pick up with areas that others have gone to so 18 I will -- but I will try to not ask repetitive questions. My name is Maureen Grady, and I represent 19 20 the residential customers of the FirstEnergy

> Now, on page 1 you were asked about your -- you gave testimony about your educational background and your experience, and you indicated

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utilities.

that you constructed a large number of economic and fiscal impact models. You mentioned to the counsel for OMA that you had done some economic impact modeling for natural gas facilities. Do you recall that?

> Α. Yes.

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- Q. Can you identify what natural gas facilities you would have done the economic impact model for?
- Α. My client for that was Salt River Project in Arizona and there were several natural gas facilities located around -- in and around the Phoenix metro area.
- Okay. Would that have been --MR. ALEXANDER: Hold on just one --Maureen, hold on. We are getting a feedback thing that just stopped, so if someone could mute their line if they are listening, we would really appreciate it.

And with that, I'm sorry, Maureen. didn't want to interrupt, but we were having a hard time hearing so please repeat your last question. MS. GRADY: Okay, sure.

> Q. You had mentioned that you had two

natural gas facilities you had done impacts —
economic impact analysis for and I was trying to
determine which those were and you mentioned the Salt
River Project. Is that one project or two?

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- A. I looked at two different facilities for the Salt River Project which is a utility in Arizona.
- Q. Okay. Thank you. I appreciate that.

 Now, you also indicate that -- that you had done
 economic impact studies for renewable -- renewable
 energy; is that correct?
 - A. For solar specifically, yes.
- Q. And can you identify the -- the project that would have involved the solar facility?
- A. I have looked at solar facilities for Arizona Public Service Company and also planned solar facilities for a private Spanish solar company that was looking at putting facilities in the Central Valley of California.
- Q. Okay. Thank you. Now, you also indicate on page 1 of your testimony, and specifically I am looking at line 16, that you constructed economic impact models for utilities in Ohio. And I wanted to make sure I understood what those would have been.

 Are there any other economic impact models that you

have constructed for Ohio utilities other than the economic impact model that you present in the testimony in this proceeding?

A. Yes. So --

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- Q. And can you --
- A. Go ahead.
- Q. Can you identify those projects, please?
- A. So by constructing a model, I mean that I built a structure, a model in Microsoft Access that I provided to my client, and my client, in turn, could use that model to run their own economic impact analyses so these were not specific reports on specific projects.
- Q. Okay. So what clients would you have done that particular work for that are utilities in Ohio?
- A. Just for FirstEnergy. The phrase is "economic development organizations and utilities in Ohio," and I have built models for economic development organizations in Ohio as well.
- Q. Okay. Yes. I was just really focusing on the work you had done for utilities in Ohio.
- A. Uh-huh. So I just want to make sure that I understand that the work that -- the work you have

done has been entirely on behalf of FirstEnergy or a FirstEnergy affiliate. In terms of building economic impact models for utilities, that is true in Ohio.

Q. Has there been any other activities with respect to the economic impact model that you have done -- let me strike that.

Are there any other economic impact modeling that you have done for utilities in Ohio other than what you present in this case and the building of the economic models you just referred to?

- A. I have done other custom economic studies for FirstEnergy Services Company that were related to projects in Ohio.
- Q. Is there anything beyond that particular project or projects that you've indicated?
- A. Do you mean in Ohio or for utilities?

 Can you be more specific?
- Q. Yes. I'm sorry. I am trying to focus in exactly on utilities and utilities within Ohio.
 - A. Okay.

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Q. What work have you done related to economic impact modeling, whether it is constructing the model or presenting a study for electric utilities in Ohio?

- A. I have done numerous projects for FirstEnergy Services Company for --
- Q. Beyond the -- I'm sorry. Beyond the projects that you mentioned for FirstEnergy Services Company, have you done any other economic impact modeling or construction of economic impact models for utilities in Ohio?
 - A. Not for utilities in Ohio.
- Q. Thank you. Now, when you refer on line 15 to "fiscal impact models," can you -- is that different than an economic impact model?
- A. Yes. A fiscal impact model concerns the revenues and expenditures for a -- usually a local government.
- Q. And that -- and you are drawing a distinction between that and the economic impact model.
 - A. Yes.

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- Q. And in your testimony you present an economic impact model and not a fiscal impact model.
 - A. That is correct.
- Q. Now, on page 2 of your testimony, I want you to look at line 9, and you indicate there that an economic impact analysis determines the impact that a

specific project may have on a region's economy. Do you see that --

A. Yes.

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- O. -- reference?
- A. Yes.
- Q. Would you consider the economic impact analysis that you have presented to be a forward-looking approach?
 - A. Could you define what you mean by that?
- Q. Well, I'm focusing on the fact that you said that your analysis looks at what a project or program may have on a -- on a region's economy, so I'm wanting to understand whether the economic analysis you present is -- is -- although it's based on historic information is to present what may happen in the future, what the impact may be into the future.
- A. No. This is simply a point in time, sort of a snapshot of the operations of these particular plants.
- Q. Thank you. Now, can an economic impact analysis determine the impact that increased utility rates paid by customers will have on the economy?
 - A. I'm sure it's possible to do an economic

impact analysis of that question.

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- Q. But you have not done that for purposes of this proceeding, correct?
 - A. That's correct.
- Q. Would you agree with me generally with increased utility rates paid by customers will have economic impacts that affect the regional economy?
 - A. I didn't analyze that question.
- Q. But just as a principal, would you agree with me that increased utility rates paid by customers will have economic impacts that affect the regional economy?

MR. ALEXANDER: Objection, asked and answered. Go ahead.

- A. I guess you would have to -- I would need you to be more specific about what you mean by economic impacts that would affect the regional economy.
- Q. Well, you present, do you not, economic impacts that affect the regional economy associated with the Davis-Besse and the Sammis plants continuing in operation, correct?
 - A. Yes.
 - Q. I'm talking about in -- or, similarly,

whether or not the -- you would see economic impacts, negative economic impacts, on the regional economy from increased utility rates paid by customers.

MR. ALEXANDER: Objection, asked and answered. Go ahead.

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- A. I really wouldn't know without having done that analysis.
- Q. Would you agree as a concept or the principle that it is likely that if you increase the utility rates that are paid by customers, there will be a negative impact on the regional economy?

MR. ALEXANDER: Objection, asked and answered. Go ahead.

- A. I couldn't say whether it would be negative or positive without having done that analysis.
- Q. Have you -- Ms. Murley, have you ever constructed an economic impact model that considers the costs associated with increased expenses to customers and their effect on the economy?
- A. No, I have not constructed that type of model.
- Q. Would you agree with me that an economic impact study by its nature does not consider the

costs borne by the community?

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- A. In general economic impact analysis does not rely on inputs regarding costs.
- Q. Okay. Now, if the costs were incorporated into -- into the study, it would change the study from an economic impact study to a cost/benefit study; is that correct?
- A. I don't know if that's really the term that I would use to describe it.
- Q. Would you agree that the monetary costs and the nonmonetary negative impacts that are inflicted on a community are not generally considered in the economic impact analysis?

MR. ALEXANDER: Objection, compound. Could we split that?

Q. Yes. That's not a problem. Would you agree with me that, Ms. Murley, that monetary costs associated with -- let me strike that.

Did you consider in your economic impact analysis presented in this proceeding the monetary costs of keeping Davis-Besse and Sammis running?

- A. I only considered the amount of jobs and payroll and taxes paid by the facility.
 - Q. So you did not consider the monetary

costs of keeping the facilities running, correct?

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- A. I guess you would have to be more specific about what you mean by "costs of keeping the facility running."
- Q. Did you consider the expenses that customers will pay for keeping Davis-Besse and Sammis running as part of your economic impact analysis?
- A. We simply looked at the value of what was produced by the plant and their supplier purchases and spending by their employees.
- Q. So you did not look at the cost that customers pay to keep the facility running.
- A. We looked at the supplier purchases which are costs of producing electricity but that was all that we looked at in terms of the impact of the plant and the employee purchases and.
- Q. Would you agree with me, Ms. Murley, the costs to customers of increased utility rates can be translated into economic values?
- A. I'm sure it's possible to run an economic impact analysis of changes in utility prices.
- Q. And can you qualitatively or quantitatively assess the costs of increased utility rates and include that in an analysis to evaluate the

net benefits a project --

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MR. ALEXANDER: Objection, compound.

Q. Let me try to break that down. Can you as part of an economic analysis, impact analysis, qualitatively assess the -- let me strike that.

Now, you discuss the IMPLAN model on page 3 and 4 of your testimony, and I am going to direct you to lines 10 and 11 on page 4 where you indicate that you -- that IMPLAN software combined with data files purchased from IMPLAN for a particular geographic region can be used to create multipliers.

- A. Yes.
- Q. Now, you state that -- that -- let me strike that.

The multipliers that you are referring to here are then used to measure the total impact of a change on all the other industries within the region study; is that correct?

- A. The mod -- the IMPLAN software can be used to create multipliers for any industry for a specific geography.
- Q. As a general, the multipliers are used to measure the total impact of a change on all the other industries within the region studied?

- A. The multipliers measure the interrelationships between the subject industry and other industries from which they make purchases and from which their employees may make purchases.
- Q. And then the multipliers feed into the total economic impact; is that correct?
- A. Multipliers can be used to quantify the total economic impact.
- Q. And, in fact, in the study that you present the multipliers have been used to quantify the total economic impact, correct?
 - A. Correct.

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- Q. Now, would you also agree with me that the multipliers estimate three components and that would be the direct effect, the indirect effect, and the induced effect, correct?
 - A. Yes, that's correct.
- Q. And the multipliers that you set -- that you used in this economic impact study did estimate these three components, correct?
 - A. Yes.
- Q. Now, for purposes of your analysis, you purchased data files for the Ohio region, correct?
 - A. Yes.

Q. And did you also purchase a data file for the tri-state region for purposes of your economic impact on -- of Sammis?

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- A. I purchased individual county files for each of the six counties.
- Q. And part of the six counties would have been in -- within a tri-state region, correct?
- A. Those six counties are in three different states.
- Q. Would you agree with me that the larger the geographic area being studied the larger the multipliers will be?
- A. Assuming that geographic area translates into more industries, yes, generally the larger the economy the larger the multipliers.
- Q. And would you also agree that the larger the multipliers the greater the total economic impact created from the economic impact analysis?
- A. The greater the economic impact within that local area.
- Q. Now, on page 5 of your testimony, lines

 12 through 13, you state that Sammis supports an
 estimated 140 full-time equivalent contractors on a
 seasonal basis during major maintenance projects. Do

you see that reference?

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- A. Yes.
- Q. What do you mean by "seasonal basis"?
- A. Sammis employs contractors for one or multiple months per year to perform certain maintenance tasks.
- Q. And do you know -- can you identify what months and the maintenance tasks associated with these seasonal contractors?
 - A. I was provided with -- I'm sorry.
- Q. I'm sorry. I was just making sure you understood it was for Sammis.
- A. Okay. I was provided with information on the full-time equivalent number of contractors based on the number of person months and what their estimated payroll was.
- Q. So the person months would tell you what the seasonal basis of the maintenance project was?
- A. I know how -- how many effectively full-time equivalent people which was, I'm sure, computed based on how many months each person was there.
- Q. Now, for purposes of the economic impact study -- let me strike that.

For purposes of your economic impact analysis, did you assume that there were any constraints on Sammis operating throughout the year?

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- A. I assumed that the output was based on the amount of income and that the income and the number of employees reflected the amount of hours that those people worked and what amount of work was required.
- Q. And perhaps I am not making myself clear. For purposes of this study, did you assume that Sammis was -- what did you assume about Sammis operations? Were you making an assumption that Sammis is operating at 100 percent for the entire study period?
- A. I relied on the IMPLAN model as to the normal level of operations for utility generation plants.
- Q. And do you know what the normal level of operations or -- for utility plants, in particular for a coal-burning plant, is in IMPLAN?
- A. I do not know the specific assumptions about the level of operations that they are assuming, but it is inherent in those output multipliers.
 - Q. And we established earlier that -- or I

believe we established earlier, did we not, that the assumptions made in IMPLAN related to the electric generation were not plant specific?

- A. That's correct.
- Q. Or industry specific?
- A. They are specific to the electric generation industry.
- Q. Right. But they are not specific by type of plant, for instance, they do not delineate between a coal-burning plant versus a gas-fired plant, correct?
 - A. Correct.

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- Q. Also they would not delineate between a coal-coal-burning plant and a solar facility,
 - A. Correct.
 - Q. For purposes of the economic impact study, does the IMPLAN model assume full employment is maintained?
 - A. I'm not sure I understand the question.
 - Q. With respect to -- you indicate that -- that as part of the economic impact analysis, there are certain job assumptions made, correct?
 - A. The direct number of jobs are actual jobs

that were provided to me.

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- Q. Okay. And those actual number of jobs are assumed that full -- full employment is maintained throughout the study period; is that right?
- A. It's based on the actual number of jobs in 2013.
 - Q. Now, on page 5, line 17 of your testimony, you indicate that "Sammis creates a total economic impact of 585.6 million in the regional economy each year." Do you see that?
 - A. Yes.
 - Q. And that figure comes from an estimate for the year 2013?
 - A. Yes, implying that that's an annual number, not a number that covers multiple years or parts of a year.
 - Q. Okay. Just to be clear it's an estimate; it is not an actual figure, correct?
 - A. Absolutely. All economic impacts are estimated.
 - Q. Thank you. Now, on page 8 of your testimony, you indicate that "Statewide, the regular operations of Davis-Besse generate an annual economic

- impact of \$473.3 million." Do you see that?
- A. Yes.

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- Q. And that figure also comes from an estimate for the year 2013?
 - A. Yes, yes.
 - Q. Now, when you use the term "regular operations," what do you mean there?
 - A. I'm excluding the steam generator placement and refueling project which is included in later results for Davis-Besse.
 - Q. And the employment numbers that were used for Davis-Besse, were those also based on actual employment numbers?
 - A. For the direct, yes.
 - Q. And those employment numbers would have corresponded to the year 2013, if you know?
 - A. Yes.
 - Q. And going back for a moment, when we talked about the Sammis economic impact analysis, you indicated those were actual employee numbers. Would those also have been based on the actual year 2013?
- A. The direct jobs were based on information for 2013.
 - Q. Thank you. Now, can you tell me why you

- looked at the statewide impact of Davis-Besse instead of just looking at the FirstEnergy service territory's impact?
 - A. When I discussed the scope of work with FirstEnergy Services Company, they chose to look at the state of Ohio as well.
 - Q. And do you know what the basis for looking at the state of Ohio was?
 - A. No.

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- Q. And when you say they chose, would that have been Ms. Noewer of FirstEnergy Solutions; is that correct?
- MR. ALEXANDER: Objection, assumes facts not in evidence. Go ahead.
- A. I don't recall exactly.
 - Q. Who would you have talked to about the scope of the Davis-Besse geographic area?
 - A. I don't recall exactly who was involved in that conversation.
- Q. Do you know the economic impact from the regular operations of Davis-Besse that come solely from the FirstEnergy service territory?
 - A. No.
 - Q. Now, on page 10 of your testimony, lines

13 and 14, you -- and you have been asked some questions about this, but I just want to ask some clarifying questions. You state that the economic impact is 1.06 billion each year.

A. Yes.

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- Q. That -- now, does that figure -- the \$106 billion figure is a -- is a composite figure for both Sammis and Davis-Besse, correct?
- 9 A. It's a combination of the impacts of both plants.
 - Q. Okay. And for Sammis we have 585.6 economic impact for the tri-state or the six-county region, correct?
 - A. Yes.
 - Q. And then for Davis-Besse, we have 473.3 million for the ongoing operations on a statewide basis?
 - A. Yes.
 - Q. Now, on page 10 of your testimony at the very at the very bottom, I believe, you state that "The effects on local communities would be devastating if these Plants closed." Do you see that?
- 24 A. Yes.

- Q. I guess that's actually lines 14 and 15.
- A. Uh-huh.

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- Q. Now, what is your understanding about whether or not these plants will or will not close?
- A. I have -- I have no specific information about that. I was simply making a comment about the importance of the plants to these local communities.
- Q. Okay. Now, on page 10, lines 21 through 23, you state that "If additional levies were passed to make up for some of the lost property tax revenues, that would increase the amount of money that residents and businesses spend on taxes and" then that would "correspondingly decrease the amount that was available for other types of purchases." Do you see that?
 - A. Yes.
- Q. If additional dollars are collected from customers to support these two plants, would you also agree that there would be a corresponding decrease in the amount of money that residents and businesses have available for other types of purchases?

MR. ALEXANDER: Objection, asked and answered in Mr. Fisk's examination. Go ahead.

A. Assuming that the amount of money that

the residents had to spend remained the same, there would be a reallocation of their spending.

Q. Would you agree with me, Ms. Murley, that a positive economic impact coming out of an economic impact study does not necessarily mean that a product should be supported?

MR. ALEXANDER: Could I have that question reread.

(Record read.)

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MR. ALEXANDER: Objection to the phrase "product" as vague.

- Q. I'm sorry, project. Let me restate that just to be clear. Would you agree, Ms. Murley, that a positive economic impact coming out of an economic impact study does not necessarily mean that a project such as the Davis-Besse or Sammis project should be supported?
- A. I can't really comment on how people should use the information from the economic impact study to make those kinds of judgments.
- Q. Are you presenting any recommendation to the PUCO about how it should use the results of your economic impact study?
 - A. I'm presenting the economic impacts.

Q. But you are not making a recommendation to the Public Utilities Commission of Ohio that the results should be used in any particular way.

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MR. ALEXANDER: Objection to the extent it calls for a legal conclusion. Go ahead.

- A. I'm not making a specific recommendation about how the results should be used.
- Q. Are you making a recommendation,

 Ms. Murley, by presenting your economic impact

 studies that the Commission approve the company's

 application in this case?
- A. I'm presenting my testimony on behalf of the companies.
- Q. Should the PUCO base its decision in this case upon the results presented by your economic impact study?

MR. ALEXANDER: Objection. Calls for a legal conclusion. Go ahead.

- A. I'm sure there are many factors that they will consider.
 - Q. In your $\operatorname{\mathsf{--}}$ let me strike that.

Under the study that you present, the economic impact analysis of Sammis and Davis-Besse, can we tell whether or not the spending proposed for

- those plants stimulates the economy more than any other kind of investment?
- $\hbox{A.} \quad \hbox{That question is outside the scope of} \\$ what I analyzed.
- Q. So you did not examine or compare the benefits that could be obtained from using customers' resources for other activities, correct?
 - A. That's correct.

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- Q. And did you examine in your benefit -- in your cost -- in your economic impact analysis who benefits and who pays for the Davis-Besse and Sammis plant?
- A. Those types of questions are outside of the scope of economic impact analysis.
- Q. And did you not consider the transfer of money between customers and the utility as part of your analysis?
 - A. That's a different type of analysis.
- Q. Does your economic impact analysis consider that support for these plants may displace other investments that might otherwise occur?
 - A. I didn't look at that in my analysis.
- Q. So you did not study the displacement costs or consider whether other options may have

- brought in even more positive economic impact?

 MR. ALEXANDER: Objection, asked and
 answered. Go ahead.
 - A. I don't believe I can improve upon my answer.
 - Q. Can you tell me what the report that you present -- let me strike that.

Let's go to your Attachment SM-1. And as we've testified, the Sammis -- the economic impact analysis for Sammis involved the tri-state region, correct?

- 12 A. It involved six specific counties in three states.
 - Q. Yes. And you also testified that you do not know the Ohio-specific revenue and economic impact of Sammis.
 - A. I didn't look at that.
 - Q. Now, you indicate that Sammis employs close to 400 people. Do you see that reference?
 - A. No. Where are you looking?
- Q. In the second paragraph on page 1, I'm sorry.
 - A. Yes.

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Q. Do you know whether that is full- or

- part-time employees?
- 2 A. I assumed that's total employment.
- Q. So that would be full- as well as part-time?
 - A. Yes.

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- Q. Do you know the breakdown between fulland part-time employees?
 - A. Not off the top of my head, no.
 - Q. Okay. And do you know as of what date that 400 people figure is -- is related to?
 - A. That's 2013 data.
- Q. Okay. Do you know the current amount of employees at Sammis?
 - A. What do you mean by "current"?
 - Q. As we sit here today, can you tell me what -- what amount of employees there are at Sammis?
- 17 A. No.
- Q. Do you know how that number compares to the 2013 400 employee number?
 - A. Since I don't know current employment, no, I can't comment on how it compares.
 - Q. And do you know as you sit here today the breakdown of employees between Ohio employees and the Pennsylvania and West Virginia employees?

- A. For what time period?
- Q. As we sit here today, can you tell me what -- what the breakdown is between the Ohio employees versus Pennsylvania and West Virginia employees of Sammis?
 - A. No.

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- Q. Are you aware of any changes in the percentages of employees from 2013 to the current date?
 - A. I didn't --
- Q. That comes from -- I'm sorry. That comes from the tri-state region.
- A. I don't have data on the current today distribution of where employees live.
- Q. Now, can you tell me -- you have listed that the annual payroll is \$34 million and that's mentioned again in connection with the 400 employees. Do you know how much of the employee payroll is Ohio payroll alone and not related to West Virginia or Pennsylvania?
- A. I do not know how much payroll is associated with employees that live in Ohio versus those that live in other states.
 - Q. Do you know, Ms. Murley, whether the

employment numbers vary with the production of energy coming out of Sammis?

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- A. I haven't looked at a time series of employment relative to production levels.
- Q. Do you know whether -- let me strike that.

Do you know whether planned or unplanned outages at Sammis affect the employment numbers of -- at Sammis?

- 10 A. I haven't specifically looked at that issue.
- 12 Q. Does your model assume that -- let me
 13 strike that.

Does the economic impact analysis in your study assume that production will not vary coming out of Sammis?

- A. It's simply a snapshot for a particular point in time.
- Q. So that snapshot would assume a static level of production?
 - A. Over what time period?
 - Q. Over the entire study period.
- A. I don't think it matters whether the actual level of production is exactly equivalent on

every day in the year.

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- Q. But under your model you're assuming that production is the equivalent of that snapshot for the entire period, correct?
- A. For the whole year I'm assuming that is the amount of production.
- Q. And, in turn, you are also making -- the economic impact analysis also makes the assumption that 100 percent of the employees will be constant or that 100 percent of the employees will be constant throughout the entire year, correct?
- A. The analysis assumes that this amount of employees would work there all year.
- Q. Thank you. Now, on page 1 of your -- your SM-1 attachment, you state that the estimates made in your analysis are based on hypothetical assumptions, among other things. Do you see that?
 - A. Uh-huh.
- MR. ALEXANDER: You have to answer -- you have to answer orally.
 - A. Yes.
- Q. Okay. And we're referring to the last sentence on page -- on page 1, correct?
- A. Yes.

- Q. Now, the hypothetical assumptions, those are made by IMPLAN, correct?
- A. Yes. These are assumptions about spending patterns that are made by IMPLAN.
- Q. And have you examined or do you know of each of those hypothetical assumptions that are made by IMPLAN for purposes of the economic impact analysis you present in this proceeding?

MR. ALEXANDER: Objection, overbroad. Go ahead.

- A. IMPLAN is a very complex model, and I can't comment on every specific assumption.
- Q. So you don't know what -- what specific assumptions are made by IMPLAN for purposes of your net impact analysis presented in this proceeding?

 MR. ALEXANDER: Again, objection,

overbroad.

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- A. Could you be more specific about what types of assumptions?
- Q. Well, Ms. Murley, I am trying to explore the statement that you made on page 1 of the SM-1 where you refer to hypothetical assumptions, so I am just trying to understand what hypothetical assumptions there are made by IMPLAN and what your

knowledge is of those assumptions.

A. IMPLAN --

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- Q. So -- go ahead.
- A. IMPLAN makes assumptions about the types of goods and services that are required by industries in the electric utility generation sector, and it makes assumptions about what share of those purchases can be made locally. And it makes assumptions about household spending patterns of employees based on their income level, what particular goods and services they buy and what quantities as an aggregate.
- Q. Can you tell me how many hypothetical assumptions are made by IMPLAN? Are we talking about hundreds of assumptions?
- A. I couldn't quantify exactly how many assumptions IMPLAN makes in building their software.
 - Q. A lot of assumptions, would you agree?
 - A. It's a very complex model.
- Q. Now, you indicate on footnote 1 that "This analysis," and I assume you are referring to the economic impact analysis there?
 - A. Yes.
 - Q. "Is based on the best available

- information." Do you see that reference?
- A. Yes.

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- Q. And can you tell me the best available information -- where that best available information comes from?
 - A. It's referring to the information that was provided to me by FirstEnergy Services Company.
 - Q. Okay. You're not referring to information -- the data files on geographic information; is that right?
- A. I would say that the IMPLAN data is also based on the best available assumptions.
- Q. But when you refer to "the best available information" there in that footnote, you are referring to the information from FirstEnergy Solutions, correct?
- A. I am.
 - MR. ALEXANDER: Objection, misstates

 prior testimony. I believe she testified FirstEnergy

 Service Company but go ahead.
 - A. I'm referring to all of the assumptions and information that I used in the analysis.
 - Q. Now, the information and assumption that was provided to you by FirstEnergy Services Company,

you've identified that -- that information and that information is found on Attachment 1 for Sammis; is that right?

- A. That's correct.
- Q. And was there any other information that was specifically provided for by FirstEnergy Services Company?
 - A. No.

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- Q. Now, you also indicated in SM-1 even if the assumptions were to occur, there would usually be differences between the estimates and actual results. Do you see that?
 - A. Yes.
- Q. Is that based on your experience from running the economic impact model?
- A. Yes, in that we don't know exactly who their suppliers are and who the suppliers to their suppliers are, and so we are making assumptions about that.
- Q. And has your experience been there are differences between the estimates and actual results that you present on -- in economic impact analysis in general?
- A. I'm making assumptions about their

purchasing patterns. I have to assume that there may be differences in actual purchasing patterns and my assumptions.

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- Q. Do you ever have to -- after you conduct the economic impact analysis, do you ever go back and look at the differences between the estimates and the actual result?
- A. Because the estimates, for example, for the induced impacts include not only the supplier purchases made by FirstEnergy Services Company or the operate or the operating entity for Sammis but also the suppliers to their suppliers, it would be impossible to verify all of that information using actual data and isolate those specific activities because, you know, lots of things are happening in the economy at the same time. This isn't all happening in isolation.
- Q. So it's not -- would you agree with me it's not something that you generally do after you conduct an economic impact analysis? You don't look at what you estimated and what actually occurred?
- A. It would be impossible to look at what exactly actually occurred.
 - Q. Can you quantify the -- what the

difference is that you refer to, what percentage difference you would expect between the estimated results of an economic impact analysis and the actual results variance, what the variance would likely be?

- A. There are many variables involved in that question. I can't give you an exact percentage.
- Q. Can you give me a general percentage where -- can you tie it to a general percent what the difference would be likely between the economic impact analysis estimate and the actual economic impact?

MR. ALEXANDER: Objection. She testified the actual can't be calculated so asked and answered. Go ahead.

- A. I don't believe I can improve on that answer.
- Q. Now, your footnote you also indicate that events or circumstances frequently do not occur as expected. Do you see that?
 - A. Yes.

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- Q. Can you tell me by -- what you are referring to there?
- A. Things can change in the actual course of operations and this is looking at many iterations

of -- of buyers and suppliers.

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2 Q. So any event or circumstances -- let me strike that.

So you could be referring to any number of factors, or you could be referring to any number of factors that are looked at in the impact analysis; is that fair?

- A. Yes.
- Q. Could be something like customer spending, correct?
- MR. ALEXANDER: There's no question pending.
 - Q. You could be referring to, for instance, customer spending would be something that frequently does not occur as expected?
 - A. No, I wouldn't think of that as what I would typically be looking at.
 - Q. Can you tell me what you would think of as typically being looked at then?
 - A. Suppose, for example, that a supplier or a supplier to a supplier went out of business and had to be replaced with someone in a different location.
 - Q. Okay. Can you give me any other instances that -- that you would refer to as that

relates to events or circumstances that frequently do not occur as expected?

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- A. Suppose that some particular employee household changed their spending pattern because of some particular personal event that happened in their family.
- Q. Can you give me any other factors that would equate to events or circumstances that frequently do not occur as expected?
- A. I'm sure there are plenty of other examples but those are the examples I can come up with at this moment.
- Q. Would you agree with me that perhaps employment levels might be something that would fit as an event or circumstances that frequently did not occur as expected?
- A. In this case I was using employment data for a period that had already occurred.
- Q. Understood. Now, you state that "The information and the observations," and I am still in the footnote, "The information and observations are based on our present knowledge of components of development and the current conditions of the effected area." Do you see that?

A. Yes.

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- Q. Can you define for me what you mean for "present knowledge"? What period of time you are talking about?
- A. What is currently known about the activities about the plant and the economic base of the area as of the time of the report being completed.
- Q. And that would be based upon the -- the IMPLAN data purchased?
- A. As well as the data provided to me by FirstEnergy Services Company.
- Q. Okay. And then when you refer to the current conditions of the affected area, current would be a reference to the timeframe that the analysis was undertaken?
- A. In this case the timeframe that the IMPLAN data applies to.
 - O. And that would be 2013?
- A. The data is always delayed one year, and so the IMPLAN data is for 2012.
- Q. Okay. Would you -- do you believe it's appropriate to consider the nonrecurring impacts of activities undertaken at a plant in your net --

net -- in your economic impact analysis?

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- A. Yes, as long as it's clear that they are nonrecurring activities.
- Q. Should the nonrecurring activities be looked at in a different light than the recurring activities in determining the economic impact that results from your study?
- A. For the specific year we looked at the one-time activities really did occur in that year and really did contribute to the economic impacts in that particular year. We're not suggesting that they would occur again in the next year.
- Q. Does it depend on what use you want to make of the economic study when the nonrecurrent activities should be included?
- A. I think it's just important to be clear about what's recurring and what's nonrecurring. I suppose you may refer to one or the other depending on what you were looking at.
- Q. And to be clear the Davis-Besse nonrecurring activity was separate from the recurring activities and was identified separately in the economic impact analysis that you conducted?
 - A. It's identified here separately in the

tables.

- Q. Now, on page 2 of your study, SM-1, still on the Sammis issue, you've identified the \$585.6 million effect on the region, the economy in Ohio, West Virginia, and Pennsylvania. Is that the same as the annual economic impact on the regional economy for Sammis's regular operation that's described on page 4?
- A. Are you referring to the first paragraph on page 4?
 - Q. Yes.
 - A. Yes. Those numbers are the same.
- Q. And that's the figure that's identified as total output on page 3 under Figure 1?
 - A. That's correct.
- Q. Does that \$585.6 million figure include the regular operations impact that's shown on the top portion of Figure 1?
 - A. I'm sorry. I am not seeing where you are looking.
- Q. I've got -- I've got page 3 of SM-1 for

 Sammis, Figure 1, and I am looking at the 585.62

 figure called total output. And my question is does

 that 585.62 figure include the impacts that are shown

- in the top portion of Figure 1 as the W.H. Sammis regular operation?
- A. So economic impacts are expressed in terms of their variable output, income, and jobs. In this case there's no output number that's listed in that top section.
- Q. But the 582.62, that's the total economic impact, correct?
 - A. Total output.

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- Q. Total output and that is the figure you have presented as the economic impact of -- of the Sammis plant on the region -- on the geographic region you identified as the tri-state region, correct?
- A. Total output is routinely referred to as the total economic impact.
- Q. And that's how you've referred to it in your testimony, correct?
 - A. Yes.
- Q. Now, I am looking at Figure 1, and I am looking at the total jobs 1,059 in Figure 1. Do you see that?
 - A. Yes.
- Q. Is that the 1,100 jobs that are

referenced on page 2 that the operations of the power plant directly and indirectly support?

- A. Yes. I round.
- Q. In the first -- you've rounded up or rounded down? The 1,100 is rounding up?
 - A. Yes.

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- Q. And that figure was derived as an input of IMPLAN?
 - A. Yes.
- Q. Does IMPLAN have 1,100 jobs that are Ohio specific versus West Virginia and Pennsylvania?
 - A. No.
- Q. Could it have provided that information had you set the parameters differently?
- A. No, because when you create the multipliers, you have to combine those the data for all of those regions, the IMPLAN model, that data, and it becomes one region, and you cannot go back and break out the impact in a particular county using that regional data.
- Q. But if you -- it started with the regional data being Ohio specific; it would have related in Ohio-specific jobs being created, correct?
 - A. I could have created multipliers for a

- specific area in Ohio, and then I would have gotten the economic impacts for that specific area.
- Q. Yes, that was my question. Now, with regard to the revenue impact, you indicate there is a 5.5 million in annual property tax revenues. Do you see that?
 - A. Yes.

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- Q. Is that the Ohio-only effect, or does that include any other area affected?
- A. That's the amount of property tax paid by the plant and since the plant is located in Ohio, all of those property taxes are paid in Ohio.
- Q. And the same would go for the 5.6 million in indirect state and local revenues? Is that related to Ohio only?
- A. No. That's based on where those employees live and have a residence.
- Q. In Figure 6 on page 8 that would break that figure down with the state information; is that correct?
 - A. That's correct.
- Q. So if we wanted to isolate the Ohio-only revenue impact, we would just subtract out the Pennsylvania and West Virginia portion for that

- particular -- that particular factor?
- A. Are you referring to the \$5.6 million number on figure 6?
- 4 Q. Yes.

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- 5 A. Yes, you could subtract out the 6 Pennsylvania and West Virginia information.
 - Q. Now, on page 4 of SM-1, going back, you state that the \$585.6 million impact on the regional economy includes the impact of production activity at the plant. Do you see that, the very first paragraph?
 - A. Oh, okay. Yes.
- Q. Can you tell me what you mean by production activity?
 - A. Direct output.
- Q. And you do not necessarily mean how many megawatts of energy or capacity are being produced, correct?
- A. No. I am referring to direct output.
- The total output includes direct output.
- Q. Okay. Now, on page 7, you indicate -you have a multiplier of 1.17.
- 23 A. Yes.
- Q. Do you see that?

A. Yes.

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- Q. Does that figure include the tri-state impacts; is that correct?
- A. That multiplier is specific to the six-county region.
- Q. Okay. And you do not know what the multiplier effect would be if it was Ohio only?
 - A. No, I do not.
- Q. Would you expect that the employer impact would be less if it was Ohio only instead of the tri-state region?
 - A. What do you mean by Ohio only?
- Q. Ohio counties, Ohio counties and Ohio employees only considered as opposed to counties that include West Virginia and Pennsylvania.
- MR. ALEXANDER: I guess to clarify, are you asking all Ohio counties or just for the Ohio counties included in the six-county area?
- Q. Let me -- let me be more specific.

 Instead of using the tri-county area we limited the economic impact study to the Ohio counties, the four Ohio counties, would you expect that the multiplier impact would be less than the multiplier impact produced by using a six-county area?

- A. Typically if there are fewer businesses and employees within the Ohio counties listed there versus all of the counties combined, then the multipliers would be less.
- Q. And if the multipliers are less, the economic impact coming out of your economic impact study would be less, correct?
 - A. Yes. In what proportion is very unclear.
- Q. Yes. I understand that. Now, on page 5 of SM-1 you talk about local vendor purchases creating an impact of \$50.9 million per year. Do you see that reference under Section 3.2? And you refer to suppliers within the region. Are you talking about the tri-state region there?
 - A. Yes.

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- Q. So we do not know from your economic analysis what the Ohio impact would be, correct?
 - A. Correct.
- Q. And do we know -- you indicate under

 Figure 2 "the typical local supplier purchases." Do

 you know -- let me strike that.

Now, you state on page 5 that an estimated 94 percent of employees live in the seven -- in the seven-county region. Do you see

that?

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- A. Yes.
 - Q. Where did the remaining 6 percent live?
- A. In Figure 3 on page 6.
 - Q. Yes.
- A. They live in other counties not listed in Ohio, West Virginia, and Pennsylvania.
 - Q. Do you know what -- where those counties would be indicated?
- 10 A. I don't recall exactly which counties
 11 those were.
 - Q. Do you know, were they non-Ohio counties?
 - A. Well, in --
- MR. ALEXANDER: Objection, vague. Are
 you referring to the phrase "Ohio counties" on Figure
 3?
- MS. GRADY: Well, I wasn't referring to that. I was asking the witness about that.
 - A. So if you look at Figure 3, you can see the breakdown of -- by state of people who did not live in the selected counties.
 - Q. Yes. And I'm still having trouble seeing where the 6 percent is. You -- you indicate that there is 94 percent living in the seven-county

- region. That leaves 6 percent. So where is the 6 percent shown on Figure 3?
 - A. Since the total on Figure 3 adds to 100 percent, they are in other counties in those states that aren't specifically listed.
 - Q. So would I add up the other Ohio counties, other West Virginia counties, and other Pennsylvania counties?
 - A. Yes.

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- Q. Is that what you are suggesting?
- A. Yes. And there's --
- Q. And I get 7 percent.
 - A. There's a rounding difference there.
- Q. Okay. Thank you. Now, when you were counting the employee and contractor spending, do the numbers produced show spending in the tri-state area versus the Ohio area?
- A. Yes.
- Q. And the 540 regular employees and contractors listed on page 5, those are tri-state numbers?
 - A. Which numbers?
 - Q. 540 regular employees and contractors on the bottom of page 5 that you indicate.

- A. The 540 is the number of people that work at the plant.
 - Q. And so that would involve -- that would be from the tri-state area versus the Ohio-only area. That's my question.
 - A. In terms of where those people live?
- Q. Yes.

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- A. Yes.
- 9 Q. And on page 6 the \$32.5 million output

 10 is -- shows induced impact that is for the tri-state

 11 region, correct?
 - A. Yes.
 - Q. And the job support of the 160 local jobs reflects the tri-state impact again, correct?
- 15 A. Yes.
- Q. And the 1,100 jobs shown on page 6 is a figure related to the tri-state impact, correct?
 - A. Correct.
- Q. And the 67.3 million also is the annual payroll related to the tri-state impact.
 - A. Yes.
 - Q. With respect to page 8, at the bottom of page 8, you've got a figure of \$295 million that employees could generate in local sales revenues. Do

154 1 you see that? 2. Α. 295,000. 3 Ο. Yes. Do you see that figure? 4 Α. Yes, I do. 5 Q. Is that related to the tri-state impact? 6 Α. Yes, it is. 7 Q. Now, you indicate on page 9 you assume 8 local employees spend 31 percent of their wages on goods that are subject to sales tax. Do you see 9 10 that? 11 Α. Yes. 12 And that data is based on the Census Ο. 13 Annual Consumer Expenditure Study? Α. 14 Yes. 15 Ο. Do you know what date that Census Annual 16 Consumer Expenditure Study was? 17 I believe that would have been 2013 data 18 because it was available in 2014 and there is a 19 slight delay. 20 Ο. And this is an annual study as far as you 21 know? 2.2 Yes, it is. Α.

you have a copy of the census that you used to derive

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And do you have a copy of the 2013 -- do

the 31 percent figure?

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- A. It's available on the census website.
- Q. Thank you. Do you know if they have published a 2014 study --
 - A. I doubt it.
- Q. -- or later study than that which was used by you in your economic impact analysis?
 - A. I don't know.
- Q. Now, on page 9 of your testimony, you refer to the Sammis employees and local contractors that could generate approximately 1.1 million in local taxes. Do you see that?
- 13 A. Yes.
 - MR. ALEXANDER: Ms. Murley, one point of clarification. You said of her testimony. Did you actually mean of the exhibit?
- Q. I'm sorry, of the exhibit. We are still on SM-1, and I am referring to page 9 of that exhibit.
- 20 A. Yes.
- Q. So is that 1.1 million in local tax, is that -- is that the tri-state area effect?
- 23 A. Yes.
- 24 O. And the 2.2 million in state taxes

- referred to on page 9, is that state taxes for Ohio and Pennsylvania?
 - A. Yes, but in both cases this is specific to income taxes.
- Q. So it relates to the income of the employees.
 - A. Yes.

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- O. Correct?
- A. Yes, that's correct.
- Q. And the employees will be coming from
 Ohio residing in Ohio, Pennsylvania, and West
 Virginia.
 - A. That's correct.
 - Q. Now, on page 10 of Attachment SM-1, under the summary, you refer to capital investments associated with this plant. Do you see that?
 - A. Yes.
 - Q. Can you tell me what you're referring to there?
 - A. Any capital investments would translate into additional assessment value that would subsequently generate property taxes.
 - Q. And so when you make that reference, you are not talking about any specific Sammis capital

157 investments that you are aware of, correct? 1 2 Α. Correct. 3 Q. Have you reviewed the capital investments associated with Sammis that are to be made or have 4 5 been made in the past? Α. 6 No. 7 Are there any future capital investments 8 that you are aware of at -- as we sit here today 9 with -- related to Sammis? 10 No. I am not aware of any specific Α. 11 investment. 12 Q. Okay. MR. ALEXANDER: Let's go off the record 13 for just one moment. 14 15 (Discussion off the record.) 16 (Thereupon, a lunch recess was taken at 17 12:03 p.m.) 18 19 20 21 2.2 23 24

Sarah Murley 158 1 Wednesday Afternoon Session, 2 January 14, 2015. 3 4 SARAH MURLEY 5 being by me previously duly sworn, as hereinafter 6 certified, deposes and says further as follows: 7 CROSS-EXAMINATION (Continued) 8 By Ms. Grady: Good afternoon. 9 0. 10 Α. Hello. 11 I'm going to go back to page 10 of SM-1 Ο. 12 under the section entitled "Summary." 13 Α. Okay. 14 Ο. And I've got more questions to follow up 15 with you on there. You indicate in that particular 16 paragraph that cutbacks at this plant would not only 17 impact FirstEnergy employees at the facility but also 18 impact surrounding businesses. Do you see that reference? 19 20 Α. Yes. 21 What do you mean by cutbacks? 0.

2.2 If the plant were to reduce its Α. 23 employment and operations and assumably supplier purchases, that those supplier businesses would be 24

impacted and also businesses that sell to the employees.

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- Q. And is it your understanding if the company doesn't get what it wants through the -- in its application, that there had been cutbacks at the plant?
 - A. I don't really know.
- Q. Are you aware of what the reasons there would be cutbacks at the plant?
 - A. No. This was just a general statement.
- Q. Was this particular -- was this particular paragraph, was this a paragraph that you prepared on your own, or were you provided some assistance with the drafting of this paragraph?
 - A. I wrote this myself.
- Q. Let's go now to SM-2. And this attachment, correct, refers to the economic impact analysis for the Davis-Besse nuclear power station, correct?
 - A. Yes.
- Q. Now, that study you looked at the ongoing operations of Davis-Besse plus looked at a steam generator -- or generator placement and refueling project that took place over the last six months; is

that correct?

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- A. Yes.
- Q. And would you agree with me this differs from the approach taken to the economic impact study of Sammis?
 - A. I would not say the approach differs.
- Q. But we -- in Sammis you were not looking at any nonrecurring event, correct?
 - A. Correct.
- Q. And what is the reason for looking at the nonrecurring event, the steam generator placement and refueling project for Davis-Besse?
- A. It created a very significant economic impact in that year.
 - Q. Do you know how often the stem generator placement and refueling will take place for Davis-Besse? Do you know what the schedule for that would be?
 - A. No.
 - Q. Are you assuming or do you know whether or not refueling will occur for the Davis-Besse nuclear power station in the future?
 - A. I'm sure refueling would occur in the future. If the plant --

- Q. Can you say -- I'm sorry. Go ahead.
- A. If the plant continues to operate, refueling on a periodic basis is a regular part of nuclear plant operations.
- Q. Do you know how often refueling in general is done at a nuclear power station?
 - A. No.

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- Q. Do you know with respect to the Davis-Besse nuclear power station how often refueling occurs?
 - A. No.
- Q. With respect to the steam generator placement portion of the project, do you know whether that is a one-time event or that would be a recurring event?
- A. I'm sure at some point in the future the steam generator would need to be replaced. Again,
 I'm sure it doesn't last forever, but I don't know what the exact timing would be.
- Q. And -- let me strike that. And were you directed under your economic impact analysis to do this additional analysis related to the nonrecurring -- let me strike that.

Were you directed by the service company

to study the generator placement refueling project for purposes of your economic impact analysis?

- A. They requested that I include that, yes.
- Q. And with respect to the other projects that you have worked on or -- let me strike that.

In other economic impact analyses that you have conducted, have you as a matter of course looked or done an analysis which would encompass nonrecurring events related to a facility or event?

- A. Yes, I commonly look at nonrecurring events.
- Q. Now, let's go to page 1 of your testimony. I'm sorry, page 1 of SM-2. And there you refer to an estimated 2,290 additional local and nonlocal contractors that were employed over the last six months. Do you see that?
 - A. Yes.

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- Q. Can you tell me what -- how you define nonlocal contractors?
- A. Someone that had alternate living that lived far enough away that they did not go home at night. They lived in some sort of, you know, hotel or apartment or temporary rental in the region while they were working there.

- Q. And those could be -- could possibly be contractors that are outside of Ohio?
 - A. Sure.

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- Q. Is it likely that they are outside of Ohio or can you not -- can you tell?
 - A. I really don't know.
- Q. Do you know how many of the 2,290 were nonlocal contractors?
- A. Yes. Well, the nonlocal contractors worked a total of 2,737 person weeks based on information on page 6 of SM-2.
- Q. So you just know the hours they worked, not the number of nonlocal.
 - A. Right, because many of them were there for just a short period of time.
 - Q. Okay. Now, in -- in footnote 1 on page

 1, you refer to Attachment A. Is that the same as

 Attachment 1?
 - A. Yes.
- Q. Now, on page 2 you have an estimate of 1,900 jobs shown on -- as an economic impact of ongoing operations under the first bullet point. Do you see that?
- 24 A. Yes.

- Q. Was that the same -- does that refer to the same figure as the 1,862 jobs shown in Figure 1 on page 4?
 - A. Yes. It's just rounded.
- Q. Okay. Now, on page 2 you also indicate that Davis-Besse creates an annual economic impact of 473.3 million from ongoing operations, correct?
 - A. Yes.

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- Q. Is that an Ohio-only impact?
- A. Everything in this report is Ohio only but some things are specific only to Ottawa County.
- Q. Okay. And Ottawa County is where
 Davis-Besse is located, correct?
 - A. Correct.
 - Q. Okay. Now, the 689 employees referenced in the second bullet with annual payroll of 64.7 million, do you see that reference?
- 18 A. Yes.
- Q. Do you know how much of the payroll is Ottawa County?
- 21 A. I do not know where --
- 22 Q. Okay.
- 23 A. No.
- Q. And in -- do you understand why you

were -- the geographic area was defined as the entire state of Ohio for Davis-Besse for purposes of your economic impact study?

- A. I don't recall exactly why we chose the whole state of Ohio.
- Q. As you sit here today, do you know a reason why you would want to choose the entire state of Ohio to look at the economic impact of Davis-Besse?
 - A. Not specifically.

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- Q. What about generally why you would want to look at the entire state of Ohio to determine the economic impact of the Davis-Besse?
- A. Versus Ottawa County, I am sure there are a number of purchases and employees' spending activity that occurs outside of Ottawa County.
- Q. I guess I'm also trying to understand why you would look at the state of Ohio for Davis-Besse and not look at the state of Ohio for the economic impact analysis for Sammis. Can you explain why -- what the difference is and why you chose the different geographic areas for Sammis versus Davis-Besse?
 - A. Because of the location of the Sammis

plant close to the borders of other states, we chose to look at the area where most of the employees live.

- Q. And for Davis-Besse you chose the entire state because of the location of the Davis-Besse plant?
 - A. In part.

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- Q. And what is the other part?
- A. I don't remember the complete conversations that I had about why we chose that particular geography.
- Q. Who would those conversations have been with, if you recall?
- A. I don't recall exactly who all was included in those conversations.
 - Q. Would it have been with -- included Sharon Noewer?
 - A. It's likely that Sharon was included.
 - Q. Is there anyone else that comes to mind that would have been included in the conversations about what geographic area to -- to study for purposes of Davis-Besse?
 - A. I don't recall.
- Q. Now, on page 2 of SM-2, you indicate that -- under the "Impacts of the Steam Generator

Placement and Refueling Project" that an additional 2,290 contract employees were used. Do you see that?

A. Yes.

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- Q. And that those contract employees had a \$219.4 million in payroll effect?
 - A. Yes.
- Q. Do you know how many of the contractors were Ohio businesses or residents of Ohio?
- A. Well, as I stated previously, I know the number of person weeks because the issue with these contractors is that most of them were not there for the entire year.
- Q. But so you wouldn't -- you may know person weeks but you may not know how -- how many of the contractors were Ohio contractors alone, correct?
 - A. That's correct.
- Q. Now, on page 2 you state that 930 of the contractors -- of the 2,290 contractors are from the local area. How do you define "local area" there?
- A. People who live in Ottawa County or close enough to the border of Ottawa County that they commute home to their primary residence every night.
- Q. And when you -- when you use the Figure 2 -- on page 3 when you use the figure \$219 million

- of local contractor spending and local supplier purchases, how do you define "local"?
 - A. I'm sorry. Can you say where you are looking at one more time?
 - Q. I'm sorry, that is on page 3 you use the figure 219 million. It's up at the top, I believe.
 - A. Okay. Uh-huh.
 - Q. You use -- you say these are impacts from local supplier purchases and local contractor spending. I'm asking you how do you define local as you used it there?
 - A. Just give me a minute.
- Q. Thank you.

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- A. I believe there we are referring to Ottawa County.
 - Q. Okay. Now, on page 4 I want you to look at Figure 1 where you show the total jobs under steam generation re -- generation placement and refueling project, and you see a figure -- you indicate a figure 3,954. Do you see that?
 - A. Yes.
 - Q. Do you know how many of the total jobs are temporary jobs, or are they all temporary jobs?
 - A. This is all temporary situations. They

could be someone who is employed on an ongoing basis at a supplier company but during the impact period that we are measuring is just related to what they are doing relative to the steam generator placement and refueling project.

Q. Now, on Figure 1 under "Annual Direct and Indirect Revenue Impacts," is that limited to the regular operations and -- and -- let me strike that.

Where you indicate the "Annual Direct and Indirect Revenue Impacts," was that solely related to the regular operation?

- A. No. You can see in the last section I have indirect revenues from contract employees.
- Q. Yes. That would include -- where you have indirect contract employees, that would include the impacts of the steam generator placement and refueling?
 - A. Yes.

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- Q. And how do you ensure that for purposes of the economic impact analysis that you are not double counting?
 - A. Could you be more specific?
- Q. I'll try. You have two different -- you have an economic impact analysis associated with the

steam generator placement and refueling project, correct?

A. Uh-huh.

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- Q. And that was separate and apart from the economic impact analysis done with respect to the regular on -- excuse me, regular ongoing operations of Davis-Besse, correct?
 - A. Right.
- Q. And where you have the annual and direct revenue impacts of Davis-Besse on an ongoing basis, you have just indicated that you include some impact of the steam generator placement and refueling project by including indirect contract employee data --
 - A. Yes.
- Q. -- as shown on Figure 1. Can you tell me why that would not be double counting the impact of the steam generator placement and refueling project as part of the ongoing operation impact shown on Figure 1?
- A. So referring specifically to the revenue impact; is that correct?
 - Q. Yes.
 - A. Okay. So the indirect revenue impacts

for the regular employees is based on the number of regular employees and their payroll, and the indirect revenue impacts for the contract employees is based on the number of contract employees and their payroll and their length of stay in the region relative to lodging taxes, so it's two different groups of people. There really wouldn't be any potential for double counting.

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MS. GRADY: May I have a moment, please?
(Discussion off the record.)

- Q. Now, on page 6 of your analysis, and I am looking at SM-2, page 6, you say under the "Steam Generator Placement and Refueling Impact," you state that 41 percent of the employees were from the Northern Ohio region while the remaining workers were from outside the area. Can you tell me what you mean by "outside the area"? Are you talking about outside the state?
 - A. Not necessarily. They could be --
 - Q. Outside the --

MR. ALEXANDER: Yeah. We are getting that feedback. If someone could mute their phone, we would appreciate it. And could we have the question reread just because we got --

MS. GRADY: I can just restate it.

MR. ALEXANDER: That would be great.

- Q. When you state that 41 percent of the employees were from Northern Ohio region and the remaining workers from outside the area, can you define "outside the area"?
- A. It wouldn't necessarily mean outside
 Ohio. It could be just from somewhere else further
 away in Ohio but not necessarily in Northern Ohio.
- Q. Okay. Are you saying outside Ottawa County?
- A. I don't know what -- I don't have the exact counties that were included in the Northern Ohio region in -- in my head right now.
- Q. Now, you indicate on page 6 that there is an estimated 1,700 more local jobs that could be supported in other businesses throughout the state over the next several months. Do you see that?
 - A. Yes.

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- Q. Are these temporary jobs or permanent jobs, if you know?
- A. They could be temporary jobs. They could be permanent jobs. But during this time period they are being supported by additional demand created by

the steam generator placement and refueling project.

- Q. So are you saying that they would be likely temporary because the temporary nature of the -- of the project?
- A. Not necessarily. I could be a restaurant employee, and during that time period, I have people related to this project eating at my restaurant, and other times of the year I have other people. I don't necessarily lose my job after this project goes away.
- Q. Do you know with respect to the 1,700 more local jobs whether those are full- or part-time jobs?
 - A. I don't know.
- Q. Now, on page 6 you also discuss nonlocal contractor impacts and that's at the bottom of the page.
 - A. Yes.

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- Q. Again, I am going to ask you to define what you mean there by nonlocal.
- A. People that are staying overnight in some sort of facility that is not their primary residence.
- Q. Now, you indicate that you -- you have -- you base nonlocal contractor impacts on information from the Ohio Division of Travel and Tourism. Do you

see that?

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- A. Yes.
- Q. Do you know how fresh the data is with that assumption that nonlocal contractors spent \$79 per day?
- A. The general per person per day tourism spending is 2012 data.
- Q. Okay. And have you looked at the 2013 or 2014 data?
- A. I would not anticipate that 2014 data was necessarily available at this point because there is almost always a delay, but I have not looked at 2013 data.
- Q. So you don't know how the 2013 data compares to the 2012 data you used in your impact analysis?
- A. No.
- Q. Do you know if the \$79 per day figure
 that -- that -- that you derived from the -- let me
 strike that.

Is the \$79 per day figure that was derived through the \$105 figure adjusted due to working hours of the visitors?

A. It's adjusted due to the fact that they

are working while they are here as opposed to someone who is strictly here on a leisure visit.

- Q. And going to page 7, we look at Figure 4, the estimated nonlocal contractor expenditures were through a period of January, '13, through April, 2014; is that correct?
 - A. Yes.

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- Q. Going to page 7, Figure 4, you have a column called "Distribution." Can you tell me what that represents?
- A. It just shows how spending breaks down by category between lodging, food and beverage, transportation, and retail.
- Q. Now, on -- on page 7 you refer also to 133,000 in personal income in the surrounding region. Can you define for me what the surrounding region is?
- A. I see the reference. Just give me a minute.

So it could be anywhere in the state of Ohio, but we can assume that it's probably much closer to Ottawa County than that because we're talking about places where these nonlocal contractors spend money in their evening hours and weekend hours, but it's based on statewide multipliers.

- Q. Now, with respect to footnote 3 and that's at page -- I believe it's at page 10. You say there that the average depreciation assumed was 50 percent. Do you see that?
 - A. Yes.

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- Q. Do you know where that figure comes from?
- A. Well, I looked at the actual depreciation schedules; and, of course, the number is different in every year, but I just took an average of multiple years.
- Q. When you say you looked at -- I'm sorry. Go ahead.
- A. At any given point in time, you know, some of your equipment stock may be new and some of it is aging at different -- you know, it's different ages and so this was an average to represent --
- Q. And you say -- you said you looked at actual depreciation schedules. What schedules would those have been?
- A. The Ohio Department of Revenue has prescribed schedules for different types of equipment.
- Q. So it was not a specific FirstEnergy Service Company number, but it was derived from

- aggregate data provided by the Ohio Department of Revenue?
 - A. These are required depreciation schedules that are used when property taxes are computed for utility personal property.
 - Q. Now, going to Attachment 1, Davis-Besse input data, can you pull to that page, page 13.
 - A. Yes.

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- Q. And the column there says October through April labor costs, 2013 to 2014. Do you see that?
 - A. Yes.
- Q. Can you tell me why that particular timeframe was used?
- A. That's when those contractors were present in the area. That's when the steam generator placement and refueling project took place.
- Q. Can you tell me why the estimated nonlocal contractor expenditures that were examined were examined during a different period?
 - A. Can you give me a reference on that?
- Q. If you go to page 7, Figure 4, it would indicate that the local -- nonlocal contractor expenditures were examined from a period of January, 2013, through April, 2014.

A. Yes. I see that.

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- Q. Can you tell me why -- if those are different time periods why they are different time periods?
- A. I do not believe they are different time periods. I believe there's -- one of those things should have been labeled differently.
- Q. And which one should have been labeled differently?
- A. I would have to verify that before I answer.
- Q. Now, throughout the -- throughout this -- your testimony throughout your study you talked about multipliers, and we talked about the role of multipliers. Can you tell me for -- for the Sammis -- for the economic impact study conducted for Sammis how many multipliers were developed?
- A. Well, there are different multipliers for jobs, of course, and output and there are direct multipliers, indirect multipliers, induced multipliers, so I would have to count that. I believe we only used multipliers for the electric power generation no, I also used multipliers for household spending so there are direct, indirect, and

- induced multipliers for that as well. So quite a number of multipliers.
- Q. If you had to put a number on it, what would you say?
 - A. Approximately 12.

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- Q. And with respect to the economic impact study conducted for Davis-Besse, could you tell me how many multipliers were used in that study?
- A. Okay. Just give me a minute. Approximately 63.
- MS. GRADY: Thank you. If I may have a moment, I think that may be the end of my cross, but I want to take 1 or 2 minutes just to look through my questions. Thanks.

(Discussion off the record.)

MS. GRADY: That's all the questions I have. Thank you very much, Ms. Murley.

MR. ALEXANDER: And so the record is clear Ms. Grady and I spoke prior to her conducting Ms. Murley's deposition, and Ms. Grady intends to file a notice of appearance in this proceeding, and the companies consented to allowing Ms. Grady to conduct this deposition on that basis; is that correct, Ms. Grady?

	180		
1	MS. GRADY: That's correct. And I would		
2	note that the conduct of a deposition does not amount		
3	to an appearance before the Commission; and,		
4	therefore, a notice of appearance is not required.		
5	MR. ALEXANDER: Right. But you do intend		
6	to file a notice of appearance, correct?		
7	MS. GRADY: I believe that I will be		
8	filing a notice of appearance in the case, yes. I do		
9	believe that.		
10	MR. ALEXANDER: Okay. Thank you.		
11	Anyone else with questions for		
12	Ms. Murley?		
13	Hearing none that concludes and we will		
14	read.		
15	(Thereupon, the deposition was concluded		
16	at 1:07 p.m.)		
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1	State of Ohio AZ :				
2	county of Maricopa: : ss:				
3	I, Sarah Murley, do hereby certify that I have read the foregoing transcript of my deposition given on Wednesday, January 14, 2015; that together with the correction page attached hereto noting changes in form or substance, if any, it is true and correct.				
4					
5					
6	Sarah Murley Bramer				
7					
8					
9	I do hereby certify that the foregoing transcript of the deposition of Sarah Murley was submitted to the witness for reading and signing; that after she had stated to the undersigned Notary Public that she had read and examined her deposition, she signed the same in my presence on the				
10					
11					
12	day of <u>January</u> , 2015.				
13	Tudy & Swenson Notary Public				
14	Notary Public				
15					
16	My commission expires $3-31$, 2017 .				
17					
18	JUDY L SWENSON				
19	Notary Public - Arizona Maricopa County My Comm. Expires Mar 31, 2017				
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ERRATA SHEET

Please do not write on the transcript. Any changes in form or substance you desire to make should be entered upon this sheet.

TO THE REPORTER:

Page	Line	Change	Reason
6	8	Sarah Murley Brammer	omission
13	20	change "testing" to "text"	transcriptionero
25	4	change "purchased" to "discussed" omit word "not"	transcription error
43	12	omit word "not"	transcription error
107	23	insert Q. after "Un-huh"	transcription error
		•	•
		,	
			•

Date 1-26-15 Signature: Sarah Murley branner

182 CERTIFICATE 1 State of Ohio 2 SS: County of Franklin 3 I, Karen Sue Gibson, Notary Public in and for 4 the State of Ohio, duly commissioned and qualified, certify that the within named Sarah Murley was by me 5 duly sworn to testify to the whole truth in the cause aforesaid; that the testimony was taken down by me in 6 stenotypy in the presence of said witness, afterwards 7 transcribed upon a computer; that the foregoing is a true and correct transcript of the testimony given by said witness taken at the time and place in the 8 foregoing caption specified and completed without 9 adjournment. I certify that I am not a relative, employee, 10 or attorney of any of the parties hereto, or of any attorney or counsel employed by the parties, or 11 financially interested in the action. 12 IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office at Columbus, Ohio, 13 on this 20th day of January, 2015. 14 15 Karen Sue Gibson, Registered Merit Reporter and Notary Public 16 in and for the State of Ohio. 17 My commission expires August 14, 2015. 18 (KSG-5987) 19 20 21 2.2 23 24

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in

Case No(s). 14-1297-EL-SSO

Summary: Deposition (Public) of Sarah Murley electronically filed by Mr. Tony G. Mendoza on behalf of Sierra Club