BEFORE 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

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.

- - -

PROCEEDINGS

before Mr. Gregory Price, Ms. Mandy Chiles, and Ms. Megan Addison, Attorney Examiners, at the Public Utilities Commission of Ohio, 180 East Broad Street, Room 11-A, Columbus, Ohio, called at 10:00 a.m. on Monday, September 21, 2015.

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VOLUME XV

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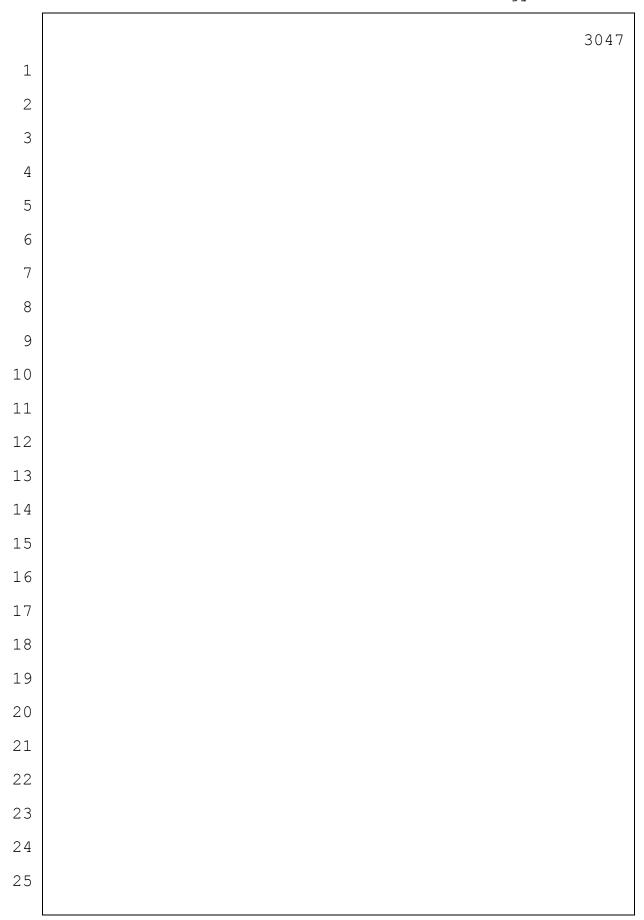
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3048 1 Monday Morning Session, 2 September 21, 2015. 3 4 EXAMINER CHILES: Let's go ahead and go 5 on the record. The Public Utilities Commission of Ohio 6 7 has called for hearing at this time and place Case 8 No. 14-1297-EL-SSO being In the Matter of the 9 Application of Ohio Edison Company, the Cleveland 10 Electric Illuminating Company and The Toledo Edison Company for Authority to Provide a Standard Service 11 12 Offer pursuant to RC 4928.143 in the Form of an 13 Electric Security Plan. 14 My name is Mandy's Chiles, and with me is 15 Megan Addison, and we are the Attorney Examiners 16 assigned by the Commission to hear this case. 17 Let's go ahead and take abbreviated 18 appearances this morning. 19 MR. BURK: On behalf of the companies, 2.0 your Honor, James W. Burk, Carrie M. Dunn, 76 South 2.1 Main Street, Akron, Ohio. Also on behalf of the 22 companies, james Lang and Trevor Alexander of the Calfee law firm and David Kutik of the Jones Day law 23 24 firm.

EXAMINER CHILES: Thank you.

MR. SAUER: Good morning. On behalf of the residential customers of the FirstEnergy

Comapnies, the Office of the Ohio Consumers' Counsel,

Larry Sauer, Kevin Moore, Ajay Kumar, Maureen Grady,

and William Michael. Thank you.

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MS. COHN: Good morning. On behalf of the Ohio Energy Group, Michael Kurtz, Kurt Boehm, and Jody Kyler Cohn.

MR. LINDGREN: On behalf of the Ohio
Attorney General mike DeWine by Thomas Lindgren,
Thomas McNamee, and Steve Beeler, Assistant Attorneys
General.

MR. STINSON: On behalf of the Northeast Ohio Public Energy Council, Power for Schools, Ohio Schools Council, the firm of Bricker & Eckler, LLP, by Glenn Krassen, Dane Stinson, and Dylan Borchers.

MR. FISK: Good morning, your Honors. On behalf of the Sierra Club, Shannon Fisk and Michael Soules.

MS. FLEISHER: Good morning, your Honors.
On behalf of the Environmental Law & Policy Center,
Madeline Fleisher.

MS. BOJKO: Good morning, your Honor. On behalf of the Ohio Manufacturers' Association Energy Group, Kim W. Bojko, Rebecca L. Hussey, from the law

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1	firm of Carpenter, Lipps & Leland.
2	MR. PETRICOFF: Good morning, your Honor.
3	On behalf of the Retail Energy Supply Association,
4	the Electric Power Supply Association, PJM Power
5	Providers, Exelon Generation, and Constellation
6	NewEnergy, Howard Petricoff, Gretchen Petrucci, and
7	Mike Settineri.
8	MR. DOUGHERTY: Good morning, your
9	Honors. On behalf of the Ohio Environmental Defense
10	Council, Trent Dougherty and John Finnigan.
11	MR. HAYS: Good morning. Tom Hays on
12	behalf of NOAC and the Individual Communities.
13	EXAMINER CHILES: Thank you.
14	MR. DARR: On behalf of the Industrial
15	Energy Users, Frank Darr, Sam Randazzo, and Matt
16	Pritchard.
17	EXAMINER CHILES: Okay. I think that's
18	everyone.
19	Are the companies ready to proceed?
20	MR. ALEXANDER: Yes, your Honor. The
21	companies call Sarah Murley.

EXAMINER CHILES: Thank you. You may be 23 24 seated.

(Witness sworn.)

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1	SARAH MURLEY BRAMMER
2	being first duly sworn, as prescribed by law, was
3	examined and testified as follows:
4	DIRECT EXAMINATION
5	By Mr. Alexander:
6	Q. Good morning, Ms. Murley. Could you
7	please state your name and business address for the
8	record.
9	A. Sarah Murley Brammer, Applied Economics,
10	11209 North Tatum Boulevard, Suite 225, Phoenix,
11	Arizona 85028.
12	Q. And Ms. Murley, did you prepare prefiled
13	direct testimony in this proceeding?
14	A. Yes.
15	Q. Did you also prepare supplemental
16	prefiled direct testimony in this proceeding?
17	A. Yes.
18	MR. ALEXANDER: Your Honor, we have
19	provided the court reporters with copies of
20	Ms. Murley's prefiled and supplemental direct
21	testimonies, which have been marked for
22	identification as Companies Exhibits 35 and 36.
23	(EXHIBITS MARKED FOR IDENTIFICATION.)
24	Q. Ms. Murley, do you have copies of your
2.5	prefiled direct testimony in front of you today?

A. Yes.

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- Q. And do you have any changes or corrections to your prefiled direct testimony?
- A. Yes. The amount of property tax paid by Davis-Besse shown on page 10 of SM-2 should have also appeared in Attachment 1 of SM-2.
- Q. Do you have any other changes or corrections?
 - A. No.
- Q. And if I asked you the same questions today as appear in your prefiled testimony, would your answers be the same?
 - A. Yes.

MR. ALEXANDER: Your Honor, the companies move for the admission of Companies Exhibit 35 and 36 and the witness is available for cross-examination.

EXAMINER CHILES: Thank you. Your motions are noted for the record, but we will rule on those after we are finished with testimony for this witness.

Do I have any volunteers for cross?

Mr. Fisk.

MS. BOJKO: Your Honor, before we get started, could I understand more specifically where the update in Ms. Murley's testimony is on her SM-2

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1	exhibit?
2	EXAMINER CHILES: Sure.
3	Ms. Murley, would you mind repeating your
4	update.
5	THE WITNESS: Sure. There is an amount,
6	\$6.3 million of property tax paid by Davis-Besse that
7	is noted in the text of page 10 of SM-2 that was
8	inadvertently omitted from Attachment 1 at the end of
9	SM-2.
10	MR. STINSON: Is there a line reference?
11	THE WITNESS: The last full line of the
12	first paragraph on page 10.
13	MR. ALEXANDER: And, your Honor, if I am
14	able to clarify this, Attachment 1 contains the
15	assumptions provided by the companies and, so the
16	amount of property tax paid for 2014 was provided by
17	the companies. It was listed on page 10 of this
18	attachment but it was not listed on Attachment 1 as
19	an assumption provided by the companies. So she's

MS. BOJKO: Your Honor, may I respond or inquire further for clarification?

now identifying it as an assumption provided by the

EXAMINER CHILES: Sure.

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companies.

MS. BOJKO: So you're stating you would

3054 just go to Attachment 1 and under the -- you would 1 2 add a whole new line under the chart that talks about 3 the property tax issue? 4 MR. ALEXANDER: That's correct. 5 MS. BOJKO: Okay. Thank you for that clarification. 6 7 MS. FLEISHER: Sorry. Just to clarify 8 further, is that SM-2 for the original direct 9 testimony? 10 MR. ALEXANDER: That's correct. 11 EXAMINER CHILES: Okay. 12 MS. BOJKO: And the amount again, your 13 Honor, was 6 --14 EXAMINER CHILES: Would you mind 15 restating the amount one more time? 16 THE WITNESS: \$6.3 million. 17 MS. BOJKO: Your Honor, I think the confusion is I don't -- I think it's on page 9 of her 18 19 direct testimony. Did she say page 10? 2.0 MR. ALEXANDER: Page 10 of SM-2. 2.1 MS. BOJKO: Oh, in the report. Thank 22 you. It's page 9 of her direct testimony. Thank you for that clarification. 23 24 EXAMINER CHILES: Is everyone clear?

Okay. Thank you very much. All right, Mr. Fisk.

3055 1 Thank you, your Honor. MR. FISK: 2 3 CROSS-EXAMINATION 4 By Mr. Fisk: 5 Q. Good morning, Ms. Murley. Α. Good morning. 6 7 How are you doing today? Q. 8 Fine, thank you. Α. 9 So you first became involved in this Ο. 10 proceeding in July, 2014; is that right? 11 Α. Yes. 12 Q. Okay. And with regards to your involvement in this proceeding, you were initially 13 contacted by Sharon Noewer; is that right? 14 15 Α. Yes. 16 Okay. And you've also spoken with Scott Ο. 17 Casto about this proceeding? 18 Α. Yes. 19 Okay. And you've also communicated with Q. 20 Mark Hayden regarding this proceeding, correct? 2.1 Α. Yes. 22 Okay. And you don't recall speaking with Q. anyone who is employed by Cleveland Electric 23 24 Illuminating Company, correct? 25 Α. Correct.

- Q. And, similarly, you don't recall speaking with anyone who is employed by Ohio Edison?
- A. Correct. But I understand that the companies were acting on behalf of the applicants.
- Q. Okay. And you do not recall speaking with anyone who is employed by Toledo Edison regarding this proceeding, correct?
 - A. Correct.

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- Q. Okay. And your direct testimony in this proceeding sets forth the results of an analysis that you performed of the economic impacts and revenue impacts of the operation of the Sammis and Davis-Besse plants; is that right?
 - A. Yes.
- Q. Okay. And just so I can make sure we are all on the same page here, you have two attachments to your direct testimony, is that right, SM-1 and 2?
 - A. Yes.
- Q. And SM-1 is the economic and revenue impacts analysis for Sammis; is that right?
 - A. Yes.
- Q. Okay. And SM-2 is the economic and revenue impacts analysis for Davis-Besse?
- 24 A. Yes.
- Q. Okay. And then the results of those two

analyses are summarized and discussed in your direct testimony?

- A. Yes.
- Q. Okay. And then you also filed supplemental direct testimony; is that right?
 - A. Yes.

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- Q. Okay. And the supplemental direct testimony has an Attachment SM-1 that is -- is it an updated economic and revenue impact of the Sammis plant?
- 11 A. Yes.
 - Q. Okay. And Attachment SM-2 is the updated economic and revenue impacts of Davis-Besse?
 - A. Yes.
 - Q. Okay. Okay. And then also with your supplemental testimony you have an Attachment SM-3 that's the economic and revenue impacts of closing the Sammis plant?
 - A. Yes.
 - Q. Okay. And SM-4, that is the economic and revenue impacts of closing Davis-Besse?
 - A. Yes.
 - Q. Okay. In your economic impacts analysis you estimate the increase in private sector jobs, payroll, and economic activity resulting from the

Sammis and Davis-Besse plants; is that right?

A. Yes.

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- Q. Okay. And then a revenue impact analysis estimates the total state and local tax revenues paid by the Sammis and Davis-Besse plants directly, and also indirectly, the taxes paid by employees of those plants?
 - A. Yes.
- Q. Okay. And in your supplemental direct testimony, your updated analyses, those use the same methodology as you used in your initial direct testimony, correct?
 - A. Yes.
- Q. Okay. And so in doing the supplemental analyses, you simply used more recent inputs and multipliers; is that right?
- A. Yes.
 - Q. Okay. So outside of the inputs and multipliers, the analyses in your supplemental testimony regarding economic impacts are the same as in your direct testimony?
 - A. Yes. The approach was the same.
- Q. Okay, okay. And you had previously carried out an analysis of the economic impacts and revenue impacts of the Sammis plant in June of 2014,

right?

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- 2 A.
 - Q. Okay. And you had also previously carried out an analysis of the economic impacts and revenue impacts of the Davis-Besse plant in November of 2014; is that right?
 - A. Yes.

Yes.

- Q. Okay. And those previous analyses were carried out for FirstEnergy Service Company; is that right?
- 11 A. Yes, for the economic development 12 department.
 - Q. Okay. And outside of the analyses you've done in the Sammis plant, you have never carried out an economic impact analysis for a coal-fired power plant, right?
 - A. That's correct.
 - Q. And outside of the analysis that you've done for Davis-Besse, you've never carried out an economic impact analysis for a nuclear power plant; is that right?
- A. No. I have analyzed other nuclear power plants.
- Q. Wait. Which ones?
- A. Another power plant, the Palo Verde

nuclear power plant.

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- Q. Any others?
- A. Not other nuclear plants. I have looked at other generation facilities.
- Q. Okay. You've done analyses of natural gas plants, correct?
 - A. That's correct.
- Q. Okay. And so if you were -- and when you have evaluated the economic impacts of a natural gas plant, would you do a similar type analysis as you did here for Sammis?
 - A. Yes, I would use a similar approach.
- Q. Okay. Okay. And if you could turn to your direct testimony, page 5, on line 17, you state that "Sammis creates a total economic impact of \$585.6 million in the regional economy each year." Do you see that?
 - A. Yes, I see that.
- Q. And that is the number -- that's the bottom line number that comes out of Attachment SM-1; is that right?
 - A. Yes.
- Q. Okay. And if you turn over to page 6 of your direct testimony, at the very top of the page there's a table. Do you see that?

- A. Yes, I see that.
- Q. Okay. And that table identifies Direct, Indirect, and Induced economic impacts of the Sammis plant; is that right?
 - A. Yes.

2.1

- Q. Okay. And under each of those headers, Direct, Indirect, and Induced, there is an output figure; is that right?
 - A. Yes.
- Q. Okay. And if you add up those three output figures, you get the \$585.6 million figure we just discussed?
 - A. Yes.
 - Q. Okay. So looking first at the direct output, am I correct that figure is the total of the wages of the people that work in the Sammis plant, the costs of the inputs needed to produce power at the plant, and profits from the plant; is that right?
 - A. Yes, that's the IMPLAN definition of output.
- Q. Okay, okay. And so essentially that output figure is the -- it's an estimated cost of producing power at the plant?
- A. It's the estimated value of power produced, yes.

Q. Okay. But it's estimated based on the cost of production, not the revenue acquired by selling that power into the market, correct?

A. Yes.

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- Q. Okay. And do you know if the value of selling power into the market from the Sammis plant for the year you analyzed was \$502 million?
- A. I didn't compare that output to the revenues for that time period.
- Q. Okay. Okay. And I believe you just testified that the IMPLAN model in calculating direct output includes profits; is that right?
- A. Yes, that's part of the definition of what's included in output.
- Q. Okay. And do you know what level of profits for the Sammis plant were included in that output figure?
- A. No. I don't have the breakdown of those particular components and how they are included in output.
- Q. Okay. Do you know if the -- do you know if the IMPLAN model did include a positive value for profits?
- A. I assume there was a positive assumption about profits. I understand that they vary over

time.

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- Q. Okay. And do you know if whatever assumption for profits included in the IMPLAN model is consistent with the level of profits the Sammis plant actually generated?
- A. No. I relied on the IMPLAN assumptions about what is typical for that industry in that geography --
 - Q. Okay.
- 10 A. -- which is generally the way that impact analysis is done.
 - Q. Okay. And the inputs for the Sammis plant that are reflected in the direct output figure, that would include the cost of the coal burned at the plant; is that right?
- 16 A. Yes.
- 17 Q. Okay. And am I right that output figure
 18 in terms of the costs of the supplies needed to
 19 produce power at the plant, those are all -- that
 20 figure comes from assumptions in the IMPLAN model
 21 itself, right?
- MR. ALEXANDER: Could I have that question reread, please?
- 24 EXAMINER CHILES: You may.
- 25 (Record read.)

MR. ALEXANDER: Objection as to form.

EXAMINER CHILES: Would you mind

rephrasing?

MR. FISK: I can restate, sure.

- Q. (By Mr. Fisk) Okay. The direct output figure identified on page 6 of your testimony, that is calculated using IMPLAN model assumptions for electric utility generation in the region, correct?
 - A. Yes.

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- Q. Okay. And so, for example, the IMPLAN model would have an assumption about the cost of coal that would be burned at the Sammis plant; is that right?
 - A. Yes.
- Q. Okay. And so the direct output figure for the Sammis plant identified in your testimony is not based on the actual costs of coal burned at the Sammis plant, right?
- A. No. I relied on IMPLAN assumptions about the purchase of coal and all other inputs, which is generally the way the impact analysis is done.
- Q. Okay. And you did not have information on the actual costs of coal burned at the Sammis plant when you did your analysis, right?
 - A. No, I didn't question that because I was

going to rely on the IMPLAN assumptions.

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- Q. Okay. And you didn't do anything to evaluate whether the IMPLAN assumption about the coal costs at Sammis were consistent with actual coal costs at Sammis; is that right?
- A. It wouldn't have been appropriate to adjust just one input and not other inputs.
- Q. Okay. So you did not do that assessment, correct?
- A. That's correct. The production assumption that's inherent in those multipliers relies on a certain balance of inputs, and it would not be appropriate to adjust one input and not other inputs.
- Q. Okay. And I believe you testified a few minutes ago the direct output also includes the wages of the people working in the Sammis plant; is that right?
 - A. Yes, as a cost of producing electricity.
- Q. Okay. And did you include the actual wages of employees at the Sammis plant in your analysis?
 - A. Yes, I did.
- Q. Okay. So you did adjust -- well, would the IMPLAN model have assumptions regarding the wages

of employees at a power plant?

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- A. Information about personal income, which is the way wages are referred to in IMPLAN, is required as an input.
- Q. Okay. So IMPLAN requires, for calculating direct output from the plant, IMPLAN requires that you input wages, correct?
- A. Right, or some assumption about wages. But, yes, some information about wages.
- Q. Okay. But then for other costs of producing power at the plant it's all assumptions built in that model?
- A. Yes. Because wages are also explicitly shown as the personal income impacts.
- Q. Okay. And would you agree that if coal for the Sammis plant were purchased outside of Ohio, the actual coal purchase would not have a direct economic benefit to Ohio?
- A. Not necessarily because the coal purchase would not, but the coal still needs to be transported to the plant where it's used, and so if that transportation was provided by a company in Ohio, there would be an impact of the transportation.
- Q. Okay. But the purchase itself would not be a benefit to Ohio, correct?

A. Correct.

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- Q. Okay. And the transportation would be a benefit to Ohio only if there was actually an Ohio-based company doing that transportation, right?
 - A. Yes.
- Q. The IMPLAN model makes assumptions regarding where supplies are purchased for a particular economic activity, correct?
 - A. That's correct.
- Q. Okay. And you use those assumptions in your economic impact analysis for Sammis?
 - A. Yes, because I purchased data to create the multipliers that was specific to the geography I was looking at, and those assumptions are inherent in those multipliers.
 - Q. Okay. And you do not know what specific assumptions were made in your IMPLAN modeling regarding where the coal for the Sammis plant is purchased, right?
- A. That's correct. I relied on the IMPLAN assumptions.
 - Q. Okay. And you didn't adjust your numbers in any way to reflect the actual sourcing of coal for the Sammis plant; is that right?
- A. That's correct.

- Q. Okay. And at the time you did your analysis, you didn't have any specific information about where coal for the Sammis plant was purchased, correct?
- A. No, I didn't request specific information about purchases because it's very difficult to get that information in a format that is needed for all the purchases for the plant.
- Q. And if you go back to page 6 of your direct testimony -- actually give me one second.

Before we do that, if you could turn to page 4 of your supplemental testimony, and there's a Figure 1 there. Do you see that?

- A. The graph?
- Q. Yes.
- A. Yes.

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- Q. Okay. And it says "Annual Direct and Total Operations Impacts of W.H. Sammis Plant." Do you see that?
 - A. Yes.
- Q. Okay. And there's a direct output figure for the Sammis region listed there. Do you see that?
- 23 A. Yes.
- Q. Okay. And that direct output figure was derived in the same way that as direct output figure

reported for the Sammis plant in your direct testimony?

- A. Yes, based on personal income, which is different in the supplemental testimony.
- Q. Okay. But in terms of all my questions I just asked about the assumptions in the IMPLAN model, your answers regarding that figure in your supplemental testimony would be the same?
 - A. Yes.

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- Q. Okay. Okay. If you could go back to your direct testimony, page 6, the table up at the top, there's a column headed "Indirect (Supplier) Impacts." Do you see that?
 - A. Yes.
- Q. And those figures refer to jobs and other economic output created through the supply purchases that are assumed to occur within the geographic region being studied; is that right?
- A. Correct, whereas direct output includes all purchases, wherever they were made, that were part of the cost of producing the good.
- Q. Okay. Okay. And in Exhibit SM-1, to your direct testimony, page 5, Figure 2 -- let me know when you are there.
- 25 A. Yes.

Q. Okay. Figure 2 is identified as "Typical Local Supplier Purchases"; is that correct?

A. Yes.

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- Q. Okay. And so this Figure 2 lists types of local supplier purchases typically made by electric generation facilities; is that right?
 - A. Yes, based on the IMPLAN assumptions.
- Q. Okay. And so IMPLAN assumes various -for the various types of purchases identified in
 Figure 2, some portion of those are made in the
 geographic region being studied?
- A. Not necessarily. These are just, in general, the kinds of purchases that would be made.
- Q. Okay. So to go from those purchases to the indirect supplier impact figures identified on page 6 of your testimony --
 - A. Yes.
- Q. -- the indirect supplier impacts are the portion of the purchases identified in Figure 2 that are made in the geographic region, correct?
- A. Yes. And the indirect output also includes suppliers to the suppliers.
 - Q. Includes what?
- A. Suppliers to suppliers within the local area so each of those suppliers also have local

suppliers so that iteration is also included.

- Q. Okay. Okay. So, for example, Figure 2 identifies legal services as one type of purchase, correct?
 - A. Yes.

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- Q. Okay. So if the Sammis plant purchases legal services, the IMPLAN model assumes some portion of those are done in the geographic region?
 - A. I would assume so, yes.
- Q. Okay. And then the IMPLAN model could also assume that those legal services might, in turn, purchase additional services for Sammis; is that right?
- A. So those legal services that Sammis is purchasing, those law firms may also have -- they make purchases also of various things, and those are included in the indirect impacts.
- Q. Okay. And with regards to all of the typical supplier purchases identified in Figure 2 of Exhibit SM-1, you did not have any data on what portion of Sammis's supplies were actually purchased in the geographic area you analyzed, correct?
- A. No. It's a standard methodology to rely on the IMPLAN assumptions about those suppliers.
 - Q. Okay. And you did not evaluate whether

the IMPLAN model assumptions regarding those suppliers are consistent with the purchases for the Sammis plant in actual practice, correct?

- A. No; because there is a lot of difficulty with getting data about where exactly purchases were made versus where, for example, invoices were sent and also difficulties with figuring out what exact type of company purchases were made for a product purchased from a manufacturer or from a wholesaler or from a retailer, for example. So it's very difficult to get the right data to be able to do that.
- Q. Okay. And if you turn to page 3 of Exhibit SM-1 --
- MR. ALEXANDER: Your Honor, for clarity of the record, you are referring to SM-1 of her direct testimony?
 - MR. FISK: Yes, thank you.
- Q. This page has a Figure 1. It says "Summary of Results." Do you see that?
 - A. Yes.
- Q. Okay. And just to make sure we are clear on the record, this is for the Sammis plant?
- A. Yes.

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Q. Okay. And down at the bottom of Figure
1, it says, "Regional impacts include the following

counties," and then there's seven counties listed; is that right?

A. Yes.

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- Q. And three of those counties are outside of Ohio, correct?
 - A. That's correct.
- Q. Okay. So in terms of the economic impacts you are identifying in your analysis for the Sammis plant, those impacts -- some of those impacts are outside of the State of Ohio?
- A. Yes, although in my supplemental testimony we did look at impacts for the State of Ohio.
- Q. Okay. But with regards to your initial testimony, would you agree the data on indirect supplier impacts can't be used to determine what the indirect economic impacts of the Sammis plant are for just Ohio?
- MR. ALEXANDER: Could I have that question read, please?
- 21 EXAMINER CHILES: You may.
- 22 (Record read.)
- A. The impacts shown here would potentially include supplier purchases in those other non-Ohio counties.

- Q. Okay. So I'm correct, you couldn't use that figure to estimate just the impacts in Ohio, correct?
- A. It would not be possible to break out just Ohio from the data we have here.
- Q. Okay. And if you go to the top of page 6 of your direct testimony again, the, I guess, the third category of impacts you've identified here are "Induced (Employee) Impacts." Do you see that?
 - A. Yes.

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- Q. Okay. And am I correct that's the economic activity and jobs created as a result of employees spending?
- A. Yes, direct employees and supplier employees.
- Q. Okay. And if you turn to Attachment SM-1 to your direct testimony, page 6, Figure 3 --
 - A. Yes.
- Q. -- 17 percent of the employees of Sammis live outside of Ohio; is that right?
 - A. Yes.
- Q. Okay. And so at least some of the induced impacts for Sammis that were identified at the top of page 6 of your direct testimony would be in states other than Ohio; is that right?

A. Yes.

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- Q. Okay. And you would have to do 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. Yes. And we did include statewide Ohio impacts in the supplemental testimony.
- Q. Okay. And in your supplemental testimony page 5, line 11, that is where you begin a discussion about economic impacts if the Sammis plant were to retire; is that right?
 - A. Yes.
- Q. Okay. And am I generally correct that analysis is similar to the analysis of the economic impact of the operation of Sammis?
- A. Yes. We're just looking at reductions in the employment and payroll over time.
- Q. But in terms of -- okay. Actually, if you could turn to page 6 of your supplemental testimony, Figure 2 at the bottom of the page.
 - A. Yes.
- Q. And so you have a direct output figure;
 is that right?
- A. In Figure 2?
- 25 Q. Yes.

A. Yes.

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- Q. And that figure is, again, created through the IMPLAN model and the assumptions within that model?
 - A. Yes.
- Q. Okay. And, similarly, the indirect supplier impacts are created through the IMPLAN model and the assumptions in that model?
 - A. Yes, using the multipliers.
- Q. So the questions I asked about your evaluation of direct and indirect impacts of the Sammis plant from your direct testimony, the answers would be the same in terms of what assumptions were used and whether you had changed any of those assumptions?
 - A. Yes.
- Q. Okay. And you did not evaluate whether the Sammis plant would close if the Commission were to deny the companies' application in this proceeding, correct?
 - A. That's correct.
- Q. Okay. And you are not offering any opinion on that matter?
- A. That's correct.
- Q. Okay. And no one at FirstEnergy told you

that the Sammis plant would retire if the companies' application were denied; is that right?

- A. That's correct.
- Q. Okay. And no one at FirstEnergy told you that the Davis-Besse plant would retire if the companies' application were denied; is that right?
 - A. That's correct.
- Q. Okay. And would you agree that spending on transmission system upgrades would create economic impact?
- A. Yes. It would create probably one-time impacts.
 - Q. Okay. And you could evaluate the economic impacts of such transmission systems spending using IMPLAN; is that right?
- A. Yes.

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- Q. Okay. You did not evaluate the economic impacts of any transmission system upgrades that might be needed if the Sammis plant were to be retired; is that right?
 - A. That's correct.
 - Q. Okay. And you did not evaluate the economic impacts of any transmission system upgrades that might be needed if the Davis-Besse plant were to retire; is that right?

A. That's correct.

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- Q. Okay. So the estimates of economic impacts of the retirement of the Sammis plant that you are providing do not factor in any economic impact of any transmission system upgrades that might be needed to allow for such retirement; is that right?
 - A. That's correct.
- Q. Okay. And similarly with regards to Davis-Besse; is that right?
 - A. That's correct.
- Q. Okay. And would you agree that if the Sammis plant were to be retired, replacement power would need to be obtained from other energy sources?

MR. ALEXANDER: Objection, beyond the scope of this witness's testimony and expertise.

17 EXAMINER CHILES: Mr. Fisk, response?

MR. FISK: I'm just trying to -- to the extent she knows, I am trying to get a sense if there are other costs.

EXAMINER CHILES: Overruled. She can answer if she holds such an opinion.

Would you like the question restated?

THE WITNESS: Yes, please.

EXAMINER CHILES: Would you please reread

the question.

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(Record read.)

- A. I'm not familiar enough with the workings of the electrical grid to comment on that.
- Q. Okay. If there were a need to build new generation in response to the retirement of, say, the Sammis plant, would you agree that that new generation would have an economic impact?
- A. Yes. But it's unlikely that those new plants would be built in the same location as the existing plants were retired.
- Q. Okay. Those economic impacts could be evaluated through the IMPLAN model; is that right?
 - A. Yes.
- Q. Okay. And you did not evaluate the economic impacts of any new generation that might be needed if the Sammis plant were to retire; is that right?
- A. That's correct because I didn't know when, where, or if that generation would be needed.
- Q. Okay. So your estimates of the economic impacts of the retirement of the Sammis plant do not factor in any economic impacts of replacing the power from Sammis; is that right?
- A. That's correct.

- Q. Okay. And is it the same with regards to Davis-Besse?
- A. Yes. And those new power plants would not likely have impacts in the local areas where the current plants are.
- Q. Okay. But you have not evaluated where any replacement power for Sammis might come from; correct?
- A. That's correct.
- MR. ALEXANDER: Objection, asked and answered.
- 12 EXAMINER CHILES: She already answered it so we will just continue on.
- MR. FISK: Okay.
- Q. All right. And are you aware of the phrase "opportunity costs"?
- 17 A. Yes.

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- Q. Okay. And am I correct that generally opportunity costs means if you are giving up spending on activity A in order to spend on activity B, there's an opportunity cost to doing activity B because you couldn't do activity A?
- A. Yes.
- Q. Okay. So if people were spending money on electricity from one source, that is money they

couldn't spending on some other economic activity,
right?

A. Yes.

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- Q. And so that potential other economic activity would be the opportunity cost of spending the money on the electricity; is that right?
 - A. Yes.
- Q. Okay. And your IMPLAN analyses in this proceeding do not factor in opportunity costs in any way, correct?
- A. Correct. Those are related to cost/benefit analysis.
- Q. Okay. And so you were not presented a cost/benefit analysis in this proceeding, right?
 - A. That's correct.
- Q. Okay. And you have not presented any sort of economic impact analysis for the OVEC plants; is that right?
- 19 A. That's correct.
- 20 MR. FISK: Okay. Your Honor, may I have two minutes?
- 22 EXAMINER CHILES: You may.
- MR. FISK: Thanks.
- 24 (Off the record.)
- MR. FISK: I have nothing further on the

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      public.
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                  EXAMINER CHILES: Thank you, Mr. Fisk.
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                  Any volunteers to go next?
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                  MS. FLEISHER: I'll go.
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                  EXAMINER CHILES: Ms. Fleisher, thank
 6
      you.
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                        CROSS-EXAMINATION
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      By Ms. Fleisher:
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                  Ms. Murley, I am Madeline Fleisher
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      representing the Environmental Law & Policy Center.
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                  So can you go to the supplemental SM-2 on
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      page 3.
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             Α.
                  Yes.
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                  Okay. And do you see there it shows 342
             Q.
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      direct employees; is that correct?
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             Α.
                  Do you have a line reference?
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             Q.
                  It's in Figure 1. I'm sorry, yes, I did
19
      say page 3. Oh, page 3 of SM-1. I misspoke.
20
             Α.
                  Yes.
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             0.
                  Okay. Is it correct it says 342 direct
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      employees there?
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             Α.
                  Yes.
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                  Okay. And can you turn to page 6 of
             Ο.
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      SM-1.
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A. Yes.

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- Q. And there at the bottom of Figure 3 it lists a total of 396 employees; is that correct?
 - A. Yes.
 - Q. Can you tell me if one of those is a typo or why there is a difference between the two?
 - A. I'm not able to explain that difference, but the 342 number was provided to me by FirstEnergy, and I would assume that to be the correct number of FirstEnergy employees.
- Q. Okay. And so if you would look at Attachment 1 to SM-1, it's correct?
- 13 A. Yes.
- 14 Q. That lists 342 employees?
- 15 A. Yes.
- Q. Okay. Thank you. And can you go to SM-1 at page 6.
- 18 A. Yes.
- Q. Okay. And is it correct that on Figure 4
 the -- it lists \$24,625,212 of employee -- direct
 employee and contractor spending for the Sammis
 region?
- 23 A. Yes.
- Q. Is it correct that it lists the same
 amount of direct employee and contractor spending for

the state of Ohio?

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- A. That's the amount they spend. It doesn't include a multiplier effect.
- Q. Okay. I'm just trying to figure out, does that mean that IMPLAN assumes that all of the spending, the direct employee and contractor spending in the Sammis region occurred in the State of Ohio?
- A. The amount of employee and contractor spending there is less than the total wages of the employees and contractors.
- Q. Okay. So when it lists the \$24,625,212 for the Sammis region, does that not include all of the employee and contractor spending in the Sammis region?
 - A. Yes, it does.
- Q. Okay. And, I guess, to pose the same question, does the \$24,625,212 for the state of Ohio, does that include all of the direct employee and contractor spending in the State of Ohio?
- A. I could have assumed that they would spend more outside of the region, but in this case I kept those numbers the same to have a more conservative estimate.
- Q. Okay. And does that number include some spending that's outside of Ohio?

- A. No. Really this is mostly probably spent in the local region, but I am using the same assumption on direct spending for the state.
- Q. But it includes some spending in Brooke County, West Virginia; Hancock, West Virginia; and Beaver County, Pennsylvania?
 - A. Yes.

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- Q. Okay. And can you go to SM-1 on page 7?
- A. Yes.
- Q. And for the direct output is it correct that for the Sammis region it's 535.88 million?
- A. Yes.
- Q. And could that include some impacts outside of Ohio?
- 15 A. It includes the value of production at
 16 the plant which is located in Ohio, so by default all
 17 of that direct output occurs in Ohio.
 - Q. Is it correct that the Sammis region includes counties outside of Ohio?
 - A. Yes, so the indirect impacts could include purchases made outside of Ohio.
- Q. And for the direct output I believe you testified that includes an assumption for profit, correct?
- 25 A. Yes, by definition.

- Q. Okay. And do you know who that profit goes to?
- A. No. It doesn't matter in terms of the definition of output.
- Q. Okay. Could some portion of that profit go to FirstEnergy Solutions' shareholders?
- A. I suppose. It's not relevant to the definition of output, though.
- Q. Okay. Could FirstEnergy shareholders be located outside of Ohio -- FirstEnergy Solutions shareholders be located outside of Ohio?
 - A. I really don't know.
- Q. And I believe you testified the direct output number is based on assumptions in IMPLAN, correct?
 - A. Yes.

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- Q. Okay. And are those assumptions generic for all coal plants, or is there a differentiation among, say, coal plants of different sizes?
- A. The output assumptions are proportional to the amount of payroll, jobs at the plant.
- Q. Okay. So when you say that the cost of inputs is based on an assumption from IMPLAN, is that assumption applied to, say, the capacity of the plant to give you an absolute value for the cost of inputs?

3087 1 MR. ALEXANDER: Could I have that 2 question read, please? 3 EXAMINER CHILES: You may. 4 MR. ALEXANDER: I'm sorry, could I have 5 that read again, please. EXAMINER CHILES: You may. 6 7 (Record read.) 8 MR. ALEXANDER: Objection as to form. 9 It's confusing. 10 EXAMINER CHILES: Ms. Fleisher, would you 11 mind breaking the question down? 12 MS. FLEISHER: No problem. I would be 13 happy to do so. 14 (By Ms. Fleisher) I believe you said cost Q. of input is an element of direct output, correct? 15 16 Α. Yes. 17 And so does IMPLAN include an assumption Q. 18 for cost of inputs that's an absolute dollar figure, or is it a multiplier? 19 2.0 It's a multiplier. Α. 2.1 0. Okay. And what is that multiplier 22 applied to? 23 Direct output, which is calculated based Α. 24 on personal income.

So the multiplier is applied to the

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Q.

personal income figure provided by the companies; is that correct?

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- A. So there are a series of multipliers, direct, indirect, and induced for jobs, income, and output. But all of the multipliers are actually in terms of per million dollars of output. That's just the way they come out of the IMPLAN model. So in order to estimate direct output, I take the direct personal income multiplier, which is dollars of personal income, per million dollars of output, and I multiply it by direct personal income, which gives me -- I'm sorry -- divide, which gives me direct output, and then I use direct output as the basis for calculating the indirect and induced impacts because all the multipliers are based on direct output.
- Q. Okay. So to make sure I'm clear -- and I think it's helpful to work with actual numbers. So in Figure 5 of Supplemental SM-1, you would take the personal income value of \$47.92 million, and IMPLAN would apply some assumptions to that to give you a value for the cost of inputs for the plant?
- A. Not exactly. So I would take the direct personal income, and I would apply a multiplier in order to estimate direct output, and then I would apply the other indirect and induced multipliers to

direct output.

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- Q. Okay. So direct output includes -includes the cost of inputs, but there is never any
 point where you sit down and calculate "here is a
 number for cost of inputs"; is that correct?
- A. That's correct, in estimating direct output, yes.
- Q. Okay. And, now, can you go to Attachment SM-2 to your supplemental testimony at page 2.
 - A. Did you say page 2?
- Q. Yes. And on the bullet point in "Jobs and Income," it indicates there that Davis-Besse indirectly creates approximately 950 additional jobs; is that correct?
- A. Yes, that's what it says.
 - Q. And can you go to Attachment SM-2 to your direct testimony, also on page 2?
 - A. Yes.
 - Q. And there in the "Jobs and Income" bullet point the report indicates that Davis-Besse indirectly creates 1,200 jobs; is that correct?
 - A. That's what it says, yes.
- Q. Okay. And is the difference between
 those numbers a result of the -- of a change of the
 IMPLAN model assumptions?

A. It is the result of both the change in the inputs and also a change in the IMPLAN model assumptions. We used the most current multiplier in the supplemental testimony, but also the most current IMPLAN model provides more detail on different types of generation facilities, and so we were using really a different industry multiplier than was available when I submitted my original testimony.

- Q. Okay. Would you say that the updated IMPLAN assumptions are likely to be more accurate?
- A. Yes, because they are more specific to that type of plant.
- Q. Okay. And when you refer to this being the result of a change in inputs as well, you are referring to a change in the personal income input provided to you by the companies?
 - A. Yes.

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- Q. Okay. And in terms of the scope of your report, is it correct that you didn't analyze any economic impact that would result from replacing Davis-Besse and Sammis with cheaper electricity?
- A. I did not look at the impacts of constructing other plants.
- Q. I guess I'm asking a different question, which is if as a result -- assuming that as a result

of the retirement of Davis-Besse and Sammis, the
retail price of electricity in Ohio were to decrease.
You did not look at potential economic impacts from
that, did you?

- A. No, I did not look at the costs or benefits of changes in electricity prices.
- Q. Okay. And you are offering no opinion as to how electricity prices might change if Sammis or Davis-Besse were to retire?
- A. That's correct.
- Q. And I believe you said that you had done a previous November, 2013, economic impact analysis for Davis-Besse; is that correct?
 - A. Yes.
- MS. FLEISHER: May I approach, your
- 16 Honors?

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- 17 EXAMINER CHILES: You may.
- MS. FLEISHER: I think we are on ELPC 16,
- 19 although someone please correct me if I'm wrong.
- 20 EXAMINER CHILES: So marked.
- 21 (EXHIBIT MARKED FOR IDENTIFICATION.)
- MS. FLEISHER: And for the record this is
- 23 Sierra Club Set 7-RPD-112, plus Attachment 1 to that
- 24 request.
- MR. ALEXANDER: Counsel, for clarity of

the record, my copy also seems to have two pages or several pages labeled "Attachment 2."

MS. FLEISHER: Let me just -- we may be able to -- yeah. Let's go ahead and include that, so Attachment 2 as well.

- Q. (By Ms. Fleisher) Ms. Murley, just take a second and look at these, and let me know when you're done.
 - A. I'm ready to proceed.
- Q. Sure. So Attachment 1, is that the November, 2013, report you prepared regarding Davis-Besse?
- 13 A. Yes.

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- Q. And for Attachment 2 is that a June,
 2014, report you prepared regarding Sammis?
- 16 A. Yes.
- MS. FLEISHER: That's all I have, your Honors.
- 19 EXAMINER CHILES: Thank you.
- 20 Any volunteers to go next. Ms. Bojko?
- MS. BOJKO: Go ahead.
- 22 EXAMINER CHILES: Mr. Petricoff.
- MR. PETRICOFF: I will give her an extra
- 24 | minute or two.
- 25 EXAMINER CHILES: Would you please use

3093 1 your microphone, please. Thank you. 2 3 CROSS-EXAMINATION 4 By Mr. Petricoff: 5 Ο. Good morning. Can you hear me now? 6 Α. Yes. 7 Okay. I have got a couple -- I am Howard Q. 8 Petricoff, and I represent a number of independent 9 power producers and marketers. 10 First I would like to get a couple of facts from you, if you know them offhand. For your 11 12 direct testimony, do you recall when you prepared the original studies both for Sammis and for Davis-Besse? 13 I know when I finished them based on the 14 Α. dates. I don't know the exact date that I started. 15 16 Oh, finished is fine. What's the date 17 that you finished the two studies on -- this is for 18 your direct testimony. 19 Oh, for my direct testimony. I finished 2.0 them in July of 2014. 2.1 Okay. And then for your supplemental 22 testimony, when did you finish those studies?

> Α. In May of 2015.

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And now, if you would, I would like you to get two pages out of your testimony. I would like

you to look at Attachment 1 for the Sammis plant, input data on page 11 of the original report that went with the direct testimony. And then if you would, I would like you to compare that with page 10 of the attachment in the supplemental testimony, and that should also be Sammis plant input data.

- A. Could you repeat that?
- Q. Sure. I want you to look at the -- this would be the Attachment 1 to your report that went with the direct testimony on page 11, and then there is a corresponding chart on attachment -- this would be on page 11 of Attachment 1, but in the supplemental so you should have two charts, one that says "Attachment 1 Sammis Plant Input data" and it starts with the first column is "2013 Regular Employees."

And then if you look at the Attachment 1 in the supplemental testimony, first column it is "2015 Regular Employees."

- A. Yes.
- Q. Okay. Got both handy?
- A. Yes.

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Q. Now, from the discussion earlier today and in the deposition, am I correct in assuming that the IMPLAN model is a discrete model in which the

operator puts in defined variables and then gets a result?

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- A. Yes, you put in specific inputs and then get a result.
- Q. So it's more akin to, like, TurboTax where you don't write the program, you just put in income and expenses and then you get a result back from the program. Does IMPLAN work in a similar fashion?
- A. I would say that you can view information in the model, but, yes, I suppose you put in inputs and it provides you with outputs.
- Q. So this is -- when you use the IMPLAN model you are not writing formula in; you are putting in variables in order to get a result?
 - A. That's correct.
- Q. So when I look at -- let's look at the Attachment 1, page 11, to your direct testimony. Are these five items that I see on page 11, are those the inputs that you put into the IMPLAN model for the study for your direct testimony?
- A. The property tax information was used in the revenue impact and is not related to the IMPLAN part of the analysis, but the other three variables were used in calculating the economic impacts.

Q. Okay. And besides those other two variables, was there any other variable that you put into the implant model?

A. It's IMPLAN.

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- Q. IMPLAN, I'm sorry.
- A. No. I had to make choices about what industry I used and geography and that sort of thing.

 Once I made those choices, these were my inputs.
- Q. Okay. Now, let's look at the first input for the 2013 regular employees. The listing was 396, and then if you turn to the corresponding chart for the supplemental testimony, it looks like it's 342. Are those the two numbers you put into the reports?
- A. Those numbers on those attachments are correct, yes.
- Q. Do you know why there was a drop of 54 employees?

MR. ALEXANDER: Objection. I think we may be mixing apples and oranges here. Is counsel referring to Ohio employees or overall plant employees?

MR. PETRICOFF: I am just asking her about the numbers on the chart, why there is a 54-person difference.

25 EXAMINER CHILES: Overruled.

Do you know?

Would you please like the question

3 reread?

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THE WITNESS: Yes, please.

5 EXAMINER CHILES: Please read the

question. 6

(Record read.)

MR. ALEXANDER: And now objection as to form in that are we referring to Attachment 1 for earlier in Supplemental SM-1 where it gives the employee data specifically?

12 MR. PETRICOFF: I will tell you what, let me start over. 13

14 EXAMINER CHILES: Okay. Thank you, Mr. Petricoff. 15

16 MR. PETRICOFF: I will withdraw it.

- (By Mr. Petricoff) You will agree with me Q. that what we see on Attachment 1, both for the direct testimony and for the supplemental testimony, are the inputs that you put into the IMPLAN model, correct?
- Yes, those are included in those attachments, along with property taxes.
- Ο. Right. And, now, looking at the first column, which is "Regular Employees," I notice that it's 396 in your direct testimony and that in

Attachment 1 of your supplemental testimony it's 342. Can you explain to me the difference, the 54-employee difference, between the two?

- A. The 396 number is for 2013 and the 342 number is for 2015.
 - Q. So there was a drop of 54 employees.
 - A. Apparently.

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- Q. And you got these numbers from the -from the company? These are not something that you
 calculated or independently verified?
- A. I calculated -- I'm sorry. I got these numbers from the companies, and I looked at profiles of the plants on line to verify whether they seemed reasonable.
- Q. Okay. And, now, let's move over to the payroll factor, the second column on the Sammis plant input data. Once again, this is a number that you got from the company?
 - A. Yes.
- Q. Now, there is a footnote, and it says, "Excludes benefits and loadings." Can you explain that to me?
- A. That number strictly represents payroll without benefits.
 - Q. Okay. And when I look at the Attachment

1, Sammis plant input in the supplemental testimony, it has the same footnote. Were those both calculated the same way?

A. Yes.

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Q. Okay. And then the next column over is the "Contractor Labor Cost." And those numbers are -- those numbers were calculated in the -- well, first of all, you received both those numbers from the companies?

A. Yes.

- Q. And did you make any changes or -- or did you do anything to verify those numbers after you received them?
- A. I did not make any changes. There's no secondary source available for me to verify that information.
- Q. Okay. Now, earlier you told me that you had to select the right categories from the IMPLAN for the power plant; is that correct?
 - A. The right industry categories, yes.
- Q. And the industry category that you selected was electric generation?

MR. ALEXANDER: Objection. Lack of specificity as to which set of analyses are we discussing, the original or the supplemental.

EXAMINER CHILES: Mr. Petricoff, would you mind clarifying?

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- Q. Okay. Let's start with the original, the one that is the basis for your direct testimony.
- A. In that case I used an industry category of electric power generation.
- Q. Okay. Did that category distinguish between fossil fuel and nonfossil fuel?
- A. No. In that iteration of IMPLAN that detail was not available.
- Q. Now, let's switch to the model that you used in your supplemental testimony. Was there a different category -- did you use a different category for the supplemental study?
- A. There was a fossil fuel power generation category available in the most current IMPLAN data that I used in my supplemental testimony.
- Q. Is the nuclear unit considered a fossil fuel plant for purposes of the -- of the new -- the new being the latest version of the IMPLAN that you used?
- A. No. I'm sorry, I thought we were talking about Sammis. I used a nuclear power plant multiplier for the Davis-Besse analysis in the supplemental testimony.

- Q. How about in the direct testimony?
- A. In the direct testimony that distinction was not available at that time, and so I used electric power generation industry for both.
- Q. Okay. If you turn to your direct testimony, page 5, line 15, it indicates that in 2014 Sammis paid \$5.5 million in property tax. Do you see that?
 - A. Yes, I see that.
- Q. Okay. And then if you turn to your supplemental study on page 3 --
 - A. Page 3 of the testimony?
- Q. I said "study" and I should say your testimony on page 3, line 17, it indicates that the property tax was \$5.25 million. Do you know why the property tax went down?
- A. No. Those were actual numbers provided to me by the companies for different years.
- MR. PETRICOFF: Okay. I have no further questions.
- 21 EXAMINER CHILES: Thank you,
- 22 Mr. Petricoff.

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- MR. ALEXANDER: Your Honor, would now be
- 24 a good time for a break?
- 25 EXAMINER CHILES: Sure, we can take a

3102 1 break. Let's take a 10-minute break. 2 (Recess taken.) 3 EXAMINER CHILES: Go back on the record. 4 Ms. Bojko. Thank you. 5 CROSS-EXAMINATION 6 By Ms. Bojko: 7 8 Still morning, good morning, Ms. Murley. 0. 9 My name is Kim Bojko. I represent the Ohio 10 Manufacturers' Association. 11 It's my understanding that you were 12 contacted by Sharon Noewer of FirstEnergy Solutions 13 in order to present your testimony; is that correct? 14 MR. ALEXANDER: Objection. Assumes facts 15 not in evidence, particularly the employer of 16 Ms. Noewer. 17 EXAMINER CHILES: Sustained. 18 MS. BOJKO: I can back up. I thought 19 that's been pretty well established throughout the 2.0 whole three weeks, but I can ask her. 2.1 Do you know whether Ms. Noewer is 22 employed by FirstEnergy Solutions? 23 I understood she was employed under the 24 umbrella of FirstEnergy but not specifically what 25 part.

Q. But you understood that nobody from the three distribution utilities had contacted you; is that correct?

A. Yes.

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- Q. And Ms. Noewer contacted you about actually presenting testimony in July of 2014 in front of the Commission; is that correct?
 - A. Yes.
- Q. And the testimony was regarding the closure of Sammis and Davis-Besse; is that correct?
- A. No. I was asked to look at the economic impacts of the operations of Sammis and Davis-Besse.
- Q. Okay. And so you're not offering testimony today about the OVEC operating units and the economic impact of those; is that correct?
 - A. Yes, that's correct.
- Q. And you did not analyze whether the two plants, Sammis and Davis-Besse, would close or not. You just assumed the impact of them operating or in the updated, the impact of them not operating; is that correct?

MR. ALEXANDER: Objection. Compound.

The first part I believe was asked and answered as

well but --

MS. BOJKO: That's why it's compound to

1 give some foundation to the question.

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2 EXAMINER CHILES: Did you understand the question as it was posed?

THE WITNESS: No. Could you repeat the question?

EXAMINER CHILES: Could we have the question reread.

MS. BOJKO: I can rephrase, your Honor.

EXAMINER CHILES: Okay. Thank you,

Ms. Bojko.

- Q. (By Ms. Bojko) You didn't do an analysis of whether Sammis would actually close or remain operating; is that correct?
 - A. I did an analysis of what the impacts would be if it remained operating and what the impact would be of closure, but I didn't analyze whether it would close.
 - Q. And let's talk first about July, 2014, when you -- well, let's take a step back. You stated to Mr. Fisk, I believe, you originally purchased your modeling analysis in June of 2014; is that correct?
 - A. Are you referring to --
- Q. For Sammis, yes.
 - A. Yes, that's correct.
- 25 | Q. And it was November, 2013, for

Davis-Besse; is that correct?

- A. Yes, that's correct.
- Q. Okay. So when Ms. Noewer contacted you in July of 2014, did she provide you the inputs for the IMPLAN model to do the updated modeling and analysis of both Sammis and Davis-Besse?
 - A. Yes. She provided me with the inputs.
- Q. And those inputs are what you referenced earlier today on Attachment 1 of both SM-1 and Attachment 1 of SM-2; is that correct?
 - A. Are you referring to my direct testimony?
- 12 Q. Yes.

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- A. Yes, that's correct.
- Q. And if we would turn to Attachment 1 of Davis-Besse, SM-2 of your direct testimony.
 - A. Yes.
 - Q. You added this morning that you were provided the real property taxes for Davis-Besse and so you added that on Attachment 1; is that correct?
 - A. Yes.
 - Q. Did Ms. Noewer also provide you the personal property taxes for Davis-Besse?
 - A. No. That was something I estimated.
- Q. And you've stated today you did not independently verify the accuracy of the data

provided by Ms. Noewer; is that correct?

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- A. That's correct. There would not have been a secondary source to verify information about employment and payroll at the plant.
- Q. Well, you didn't actually look at

 FirstEnergy Solutions' books regarding the operations

 of Sammis or Davis-Besse; is that correct?
 - A. That's correct.
- Q. I mean, that would have been a secondary -- a secondary source of information; isn't that correct?
- MR. ALEXANDER: Objection. FirstEnergy Solutions provided the numbers; and, therefore, secondary source by definition would not have been FirstEnergy Solutions that provided the numbers in the first place.
- MS. BOJKO: Well, the plants are owned by FirstEnergy Solution, your Honor, so I guess I was assuming that the owner of the generating units would have the accounts of the generating plants.
- EXAMINER CHILES: Was your question

 more -- was your objection more about the use of the

 phrase "secondary source"?
- MR. ALEXANDER: Yes, your Honor.
- 25 EXAMINER CHILES: I am going to sustain

the objection.

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- Q. (By Ms. Bojko) Well, Ms. Murley, did you review the accounting of the books associated with the generating units to verify the numbers that were provided to you?
 - A. No, I did not.
- Q. Could we go to page 5 of your direct testimony, please. On page 5 of your direct testimony, you discuss indirect benefits of the supplier business. Do you see that?
 - A. Can you give me a line reference?
- Q. It's on lines 18 and 19 going into 20, you are talking about the supplier businesses. Do you see that on line 20?
- A. I see on line 20 where it says "local supplier businesses."
- Q. Okay. And under your analysis is the assumption that the supplier winning the contract has its principal place of business located in Ohio?
- A. The assumption is that the goods or services is provided at a location in Ohio in the case of the indirect impacts.
- Q. So they don't have to have their principal place of business in Ohio.
- 25 A. No.

Q. Did you, Ms. Murley, verify that the supplier actually did have a service or a place in Ohio, or you are just assuming that the businesses supplied a service to the plants because they are located in Ohio?

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- A. Neither. I used the IMPLAN assumptions regarding the amount of purchases by type that could be made within the specified geography, which in this case for Sammis is the seven-county region surrounding the plant.
- Q. And do you know what the IMPLAN assumes the percentage is for the services provided in Ohio?
- A. There could be hundreds of different purchases, and there are different percentages for each.
- Q. So are you suggesting that the IMPLAN model doesn't have a set percentage for each type of service?
- A. I'm suggesting that it does have a percentage for each type of good or service.
- Q. Of the percentage of that type of service that would come from Ohio or in the region, the seven-county region.
- A. Yes, the percentage that would come, in this case, from the seven-county region.

Q. And just so we're clear, when you are talking about seven-county region throughout today, you are talking about three counties that are located outside of Ohio; is that correct?

A. Yes, that's correct.

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- Q. So I think the answer to my original question was you did not verify any of those services and where they were resourced from; you just used the IMPLAN model's assumptions; is that correct?

 MR. ALEXANDER: Objection, asked and answered to Mr. Fisk.
- 12 EXAMINER CHILES: Overruled.
- THE WITNESS: Could you repeat the question?
- EXAMINER CHILES: Please repeat it.

 (Record read.)
 - A. That's correct, because of the inherent difficulties in getting the data and exactly situations like you identified where there may be a principal place of business in one location but the good or service is produced in another location.
 - MS. BOJKO: Your Honor, I move to strike everything after "that's correct."
- MR. ALEXANDER: Your Honor, may I respond to the motion?

EXAMINER CHILES: You may.

MR. ALEXANDER: The question itself I believe was somewhat broad, and the witness was differentiating her previous answer, which went over the same ground, by talking about why it was impossible to do what Ms. Bojko was suggesting.

EXAMINER CHILES: The motion to strike is denied.

- Q. (By Ms. Bojko) In the original modeling that you did in July, 2014, you did not separate out the impact of the Sammis plant on Ohio only; is that correct?
- A. That's correct. We did not look at statewide impacts in the direct testimony, only in the supplemental testimony.
- Q. Well, in the supplemental testimony you did not isolate the Ohio counties affected; you still included the Pennsylvania and West Virginia counties; isn't that correct?
- A. In the region, yes, but separately we looked at the impacts on the state of Ohio.
- Q. And it's my understanding that the inputs provided to you by Sharon Noewer were used to calculate the outputs of the model; is that correct?
 - A. I was provided with inputs on jobs and

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payroll, and I combined those with the multipliers to estimate direct output along with all of the indirect and induced impacts.

- Q. So if those numbers change, as it appears they did for your updated modeling, the outputs correspondingly would change; is that correct?
- A. By "those numbers" do you mean employment and payroll?
- Q. I mean the numbers that were provided by FirstEnergy Solutions or FirstEnergy Corp.
 - A. I'm sorry, could you repeat the question?
- Q. I'll rephrase. If the inputs change that are provided by an employee at FirstEnergy Corp., I believe you said it was Sharon Noewer, if those inputs change, the outputs correspondingly change; is that correct?
 - A. That's correct.
- Q. The updates that were provided to you for the updated testimony, who provided those updates from FirstEnergy?
- A. Are you referring to the supplemental testimony?
 - Q. Yes.

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- A. I obtained those inputs from Scott Casto.
 - Q. And do you know where -- do you know

where Scott Casto is employed or who Scott Casto is employed by?

- A. He is employed by the companies.
- Q. The distribution companies?
- A. No, FirstEnergy Service Company.
- Q. Ms. Murley, just for clarification, one of our definitions in this hearing is the companies means Cleveland Electric Illuminating Company, Toledo Edison, and Ohio Edison Company and the holding company is FirstEnergy Corp, for ease.
 - A. I apologize, I misspoke.
- Q. Thank you. And regarding the updates that Mr. Casto provided, are those 2015 numbers that he provided to you?
 - A. Yes.

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- Q. So do you know whether they were actual 2015 data to data or for what period of time? Do you know?
- A. Obviously, they were provided before 2015 was over, but I don't know the exact period of time.
- Q. And just so we're clear, the data inputs that you used for the first modeling in your direct testimony were 2013 data; is that correct?
 - A. Yes, that's correct.
 - Q. I would like to compare a few figures and

charts that are in your direct testimony, as well as in your supplemental testimony. Do you have both pieces of testimony before you?

A. Yes.

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- Q. Okay. Great. Thank you. If we look at the supplemental testimony on page 4, Figure 1.
 - A. Yes.
- Q. So Figure 1 now includes a secondary line of data for the state of Ohio, so we have the Sammis region, which is the seven-county region we discussed before and then there is an added state of Ohio data line; is that correct?
 - A. Yes.
- Q. And the Sammis region is the same with respect to that it included the seven counties that we discussed for inside of Ohio and three outside; is that correct?
- A. Are you asking whether the definition of that region is the same between the direct testimony and the supplemental testimony?
 - Q. Yes.
 - A. Yes, it is.
- Q. Okay. And the jobs in the direct testimony are listed as 400; is that correct?

25 MR. ALEXANDER: Could I have that

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      question reread, please?
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                  EXAMINER CHILES: You may.
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                  (Record read.)
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                  MR. ALEXANDER: Counsel, do you have a
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      page reference?
                  MS. BOJKO: I'm sorry. One moment, your
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      Honor.
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                  EXAMINER CHILES: Take your time.
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                  MS. BOJKO: I'm sorry. There's a
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      labeling issue. I thought they were all labeled the
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      same, and they're not apparently.
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             Q.
                  (By Ms. Bojko) In the direct testimony
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      it's not called Figure 1. It's on page 6, and it's
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      just titled the "Annual Direct and Total Operations
      Impact." And in the supplemental testimony it's
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      actually called "Figure 1." I thought they were the
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      same in both pieces. I apologize.
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                  MR. ALEXANDER: So just for clarity, was
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      your reference to 400 jobs --
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                  MS. BOJKO: From the testimony on page 5,
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      right.
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                  (By Ms. Bojko) So on page 6, is this the
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      figure that you think is comparable to the figure in
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      your supplemental testimony that's identified as
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      Figure 1 on page 4?
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A. Yes.

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Q. My apologies for the confusion.

So the jobs under direct -- on your direct testimony are listed as 535 jobs; is that correct?

A. Yes.

- Q. And the jobs listed under the first line because the comparable line, as I understand it, in your testimony and your supplemental would be the Sammis region, which is the top line; is that correct?
- A. Yes.
- Q. So the jobs listed in the supplemental testimony is 482; is that correct?
 - A. Yes.
 - Q. And in your supplemental testimony the output under the direct column has increased from 502.32 to 535.88; is that correct?
 - A. Yes.
 - Q. And direct jobs under the "Direct" column, that includes, as I understand it, Sammis jobs at the actual plant but it also includes local supplier businesses; is that accurate?
- A. No. It includes Sammis employees as well as the contractors.

Q. The local contractors?

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- A. People who work at the plant performing various maintenance activities throughout the year.
- Q. And would those contractors also be considered indirect suppliers?
 - A. No. We are counting them as direct.
- Q. So now if we turn to page 6 of your direct testimony, we are still in that, and we are going to go to page 6 of your supplemental testimony -- I'm sorry. Strike that.

Let's stay on the same. Figure 1, if you look at the "Induced (Employee) Impacts" of Figure 1 in your supplemental testimony, the number for the Sammis region is 311 jobs; is that correct?

- A. Yes.
- Q. And that has been increased from 160 jobs, which was on page 6 of the chart in your direct testimony; is that correct?
 - A. Yes.
- Q. I am trying not to ask you the same questions. Mr. Fisk did a great job earlier this morning.

Could you turn to -- this is Attachment

SM-1 of your supplemental testimony, and it's Figure

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A. Yes.

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- Q. There's a column listed -- this Figure 6 is entitled "Local and State Revenue Impacts"; is that correct for the Sammis plant?
 - A. Yes.
- Q. And under the indirect revenues, there is a category for "Sales" under "Local Taxes"; is that correct?
 - A. Yes.
 - Q. Is that sales tax?
- 11 A. Yes.
 - Q. I am assuming FirstEnergy did not provide you an update in the sales numbers; is that correct?
 - A. The only number on that table that came from FirstEnergy was the direct property taxes.
 - Q. So the change or update in the sales-tax figure would have been due to a change in the IMPLAN model?
 - A. No. The revenue impacts didn't come from the IMPLAN model. I estimated those. The change would have potentially been due to a change in employee income, which did change, and also potentially a change in the sales tax rate.
 - Q. And the update in property taxes that you just referenced for indirect revenues for

employee-driven revenues, that was also a number provided by FirstEnergy, or are you saying only the 5.5 million, which is now 5.25 million, was provided by FirstEnergy?

- A. Only the 5.5 and the 5.25 million numbers in the two reports were provided by FirstEnergy.
- Q. So you estimated the indirect revenues for the property taxes as well.
- A. Yes. I estimated all the indirect revenues.
- 11 Q. And you updated those with the new supplemental testimony as well?
 - A. Yes, I updated those calculations.
 - Q. In your analysis you did what I will call a regular case for operations of the Sammis plant -- or Sammis plant and Davis-Besse, and then for Davis-Besse you did a specific project case which included refueling and a steam generator; is that accurate?
 - A. Yes, the steam generator placement.
 - Q. And do you know how often a refueling at Davis-Besse occurs?
 - A. No, I do not.

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Q. So you haven't calculated any economic impact during a refueling year without a steam

generator replacement; is that correct?

A. That's correct.

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Q. Your analysis did not take into consideration any ancillary results if the plants were to actually -- actually close; is that correct?

MR. ALEXANDER: Objection, "ancillary results" is vague.

EXAMINER CHILES: Ms. Bojko.

MS. BOJKO: I think the witness can respond if she understands the questions, but I will be happy to rephrase.

EXAMINER CHILES: Thank you.

- Q. (By Ms. Bojko) You did not analyze any plant closure results such as new generating facilities being built; is that correct?
- A. That's correct. I didn't have any information about where, when, or if new generating facilities might be needed.
- Q. And you did not consider any economic impact resulting from a decommissioning of the nuclear plants if it were, in fact, to close; is that correct?
- A. I did include decommissioning impacts in my analysis.
- Q. In your updated analysis, not in the

initial analysis?

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- A. Yes, in the supplemental testimony, specifically in SM-4.
- Q. And your model assumes that if the plant closed, the jobs are lost and employees will move out of the seven counties; is that correct?
 - A. Which report are you referring to?
- Q. The updated analysis is the one you are assuming that the plants close; is that correct?
 - A. SM-3 and SM-4?
 - O. Yes.
- A. In those closure analyses I do not make assumptions about whether or not the employees will have to leave the area. I looked at the loss of jobs due to the closure of the plant.
- Q. Right. You don't look at whether those employees successfully obtained new jobs in either the region or the state of Ohio; is that correct?
- A. That's correct because even if those employees are to obtain a new job, that's a job that could have been filled by someone who is currently unemployed in Ohio or someone from outside Ohio.

 That job occurred independent of the closure, and if the closure hadn't occurred, there would have been additional jobs, and the economy would have been

larger than it was after the closure of the plant.

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MS. BOJKO: Your Honor, I move to strike everything after "that's correct" as nonresponsive to my question. I asked her if she considered it.

EXAMINER CHILES: Mr. Alexander.

MR. ALEXANDER: Your Honor, the question itself was pretty broad. It was not narrowly tailored, and the witness was explaining why it would not be appropriate to include that in her analysis.

EXAMINER CHILES: I am going to deny the motion to strike at this time. But I would direct the witness to please listen carefully to the questions. I want you to give a full answer, but if you could not elaborate beyond the full answer, I would appreciate it. Thank you.

THE WITNESS: Yes.

- Q. (By Ms. Bojko) Your analysis does not consider whether other people residing in the county or the state could, in fact, secure the jobs that were secured by the Sammis or Davis-Besse employees; is that correct?
- A. I'm sorry. I don't think I understand the question.
- Q. You are making pretty broad assumptions that somebody else in the county or state of Ohio

could not -- could, in fact, take the job that now a Davis-Besse employee is taking, and you didn't do any analysis to show that that's true; isn't that the case?

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MR. ALEXANDER: Objection. The initial question was did the witness address employees at Sammis potentially being hired somewhere else. The witness explained that she did not, and she explained why, and it's because those jobs are already created in the economy.

Now, this question relates to those hypothetical jobs and what assumption she made with regard to those hypothetical jobs, so I think we are several steps beyond to anything related to this witness' testimony.

MS. BOJKO: May I respond? I asked to strike the answer, and it was denied. I am now allowed to explore the basis and whether or not it is based, in fact, on assumptions.

EXAMINER CHILES: I am happy to strike her response.

MR. ALEXANDER: I have no objection to clarifying it as far as the witness' question. I just want the question itself to be clear the question didn't identify which jobs we were referring

to. If the question is clear, I have no objection to counsel getting into this in more detail.

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EXAMINER CHILES: Ms. Bojko, could you try and clarify your question.

MS. BOJKO: I will, your Honor. It was in response to the witness' response but she should know if it was her response.

Q. (By Ms. Bojko) You just stated to me you believed that the jobs in the state of Ohio or the county that are available despite the fact that Davis-Besse or Sammis closed could be filled by employees that exist today. Did you not?

MR. ALEXANDER: Objection, again, as to the form. The question is identify, if she can, referring to former employees of the Sammis plant or potential other people who could have taken those jobs?

MS. BOJKO: Well, if you read -- listen to my question, I specifically said the non-Sammis employees.

EXAMINER CHILES: Let's have the question and answer. I'm sorry, just the question. There was no answer. Let's have the question read back, please.

(Record read.)

A. I did --

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 $$\operatorname{MR}.\ \operatorname{ALEXANDER}:\ \operatorname{Stop}.\ \operatorname{We}\ \operatorname{are}$ waiting on a ruling.

EXAMINER CHILES: Please wait until we make a ruling. Thank you.

I think the question is unclear myself.

Ms. Bojko, do you mind taking another try at it and
be more specific?

MS. BOJKO: Sure.

Q. (By Ms. Bojko) Ms. Murley, you made an assumption that current residents of the State of Ohio could fill jobs that are available today even -- strike that.

Did you make the statement that existing residents or even residents from out of the state of Ohio you said could fill available jobs even if the Sammis plant was still operating -- strike that.

You made a statement that you didn't consider Davis-Besse and Sammis employees if the plants closed could -- you did not consider whether those employees could find new employment within the State of Ohio and then you stated that they would be taking jobs from other residents if they didn't accept those jobs. Is that what you were stating?

A. Yes, that there would be more jobs

available if the Sammis plant continued to operate and new jobs were created.

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- Q. Right. And those new jobs may or may not be available today with the Sammis and Davis-Besse plant operating; is that correct?
- A. I am making the assumption that the new jobs were created independent of anything that happened at the Sammis or Davis-Besse plant.
- Q. Right. So prior to the closure of Sammis and Davis-Besse, the residents in Ohio could fill those jobs that currently exist independent of the Sammis and Davis-Besse closures; is that correct?
- A. If those new jobs were created, they could be filled by residents of Ohio or people from outside of Ohio.
- Q. And if Davis-Besse and Sammis employees did find new employment, then that would reduce the effects of your IMPLAN model; isn't that correct?
- A. No, because there would still be a net loss of jobs. Those new jobs would only be replacing jobs that had already been lost.
- Q. So are you saying that no new jobs can ever be created after the Sammis or Davis-Besse plant close?
 - A. Not at all. I am simply saying there

would be less jobs total because the Sammis plant closed.

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- Q. But there could be other jobs that replace the Sammis plant jobs; isn't that correct?
- A. There could be other jobs that are created independent of what's going on at the Sammis plant.
 - Q. And the -- oh, I'm sorry.
- A. Those jobs would add to the total jobs in the economy if the plant remained open, but in this case they are simply replacing jobs that were already lost.
- Q. Well, isn't it possible that new jobs could be created because of old technologies going out of business and new technologies developing?
- A. I'm not sure I understand what you are referring to.
- Q. Well, sometimes markets correct themselves, do they not?
 - A. Yes, markets correct themselves.
- Q. So if a business is uneconomic and it closes, it's possible for a different business with a better technology to come in its place, isn't it?
- A. Are you referring to the construction of new power plants?

Q. Possibly. There could be many things that replace an old technology.

THE WITNESS: I'm sorry, can you repeat the question?

EXAMINER CHILES: Can you reread the question, please?

(Record read.)

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- A. I'm sorry, I don't understand how this question relates to the closure of Sammis.
- Q. Well, if Sammis closes because its uneconomic, it's possible that -- we will use your example a new generating plant that has better technology could replace it; isn't that true?
- A. I did not look at the impacts of new generating facilities.
- Q. And your IMPLAN model does not take that into consideration either, is that correct?
- A. It is not standard practice when looking at a plant closure to look at what happened to those people post-closure because there is still a net loss of jobs from the plant closure.
- Q. On page 10, lines 17-18 of your direct testimony, you mention that school systems may be possible -- or possibly "may be forced to implement emergency measures" and cut programs. Do you see

that?

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2 MR. ALEXANDER: Could I just have that 3 page reference again?

MS. BOJKO: Page 10, line 17 and 18 of direct.

- A. Yes.
- Q. Did you speak to the school systems in the towns or counties where the plants are located?
 - A. No.
- Q. Isn't it true in Ohio school funding

 comes from the State of Ohio, the Federal Government,

 and local taxes, which includes both property taxes

 and income taxes?
 - A. I'm not familiar with the exact formulas for school funding in Ohio.
 - Q. If we can look at Figure 6, page 8 of the Sammis report, SM-1 contained in your direct testimony. The "Property" category, are you referring to tangible property tax or real estate tax?
 - A. Are you looking at Figure 6?
- 22 Q. Yes.
- A. I don't believe there is any personal property tax included in Figure 6.
- Q. That's what I am asking. Is the property

that you are referring to real estate property only?

A. Yes.

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- Q. It doesn't include tangible personal property of the utility company?
- A. I apologize, I misspoke. It does include personal property taxes paid by the utility.
- Q. And, Ms. Murley, isn't it true that
 Senate Bill 3 deregulated the electric utility
 industry and reduced the electric utility tangible
 personal property tax on generating units 25 percent
 of true value?
- MR. ALEXANDER: Objection as to compound and beyond the scope of her testimony.
- MS. BOJKO: May I respond?
- 15 EXAMINER CHILES: Yes, please.
- MS. BOJKO: She testified about the
 economic impacts on schools, and this goes to the
 heart of where schools are funded and whether they
 will have to declare an emergency, like Ms. Murley
 claims in her testimony on page 10.
- 21 THE WITNESS: Could you repeat the 22 question?
- MR. ALEXANDER: Hold on.
- EXAMINER CHILES: I am going to sustain
 the objection. I am not sustaining it across the

border. I am not sustaining as to beyond the scope.

I will allow a bit of questioning on this, but if you could break up your question and the witness, you know, can answer to the extent she holds knowledge on the subject.

MS. BOJKO: Sure.

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Q. (By Ms. Bojko) Ms. Murley, are you aware that when Senate Bill 3 deregulated the electric industry, there was a tax change on generating facilities in the State of Ohio?

MR. ALEXANDER: Objection, again, compound. The question assumes the Senate bill deregulated the electric industry and then adds another question at the end.

EXAMINER CHILES: Ms. Bojko, could you just break it up?

MS. BOJKO: Sure.

EXAMINER CHILES: Thank you.

- Q. (By Ms. Bojko) Ms. Murley, isn't it true that Senate Bill 3 deregulated the electric utility industry?
- A. I'm not familiar with the details of Senate Bill 3.
- Q. Are you aware that there was a change in tax structure for generating units beginning

January 1, 2000?

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- A. I am aware that utility personal property is currently assessed at a rate of 24 percent.
- Q. And, I'm sorry, I think I misspoke. It was 2001. January, 2001 was the effective date of that new tax that you're referencing; is that correct? Or you're not sure?
 - A. I don't know.
- Q. Okay. Ms. Murley, isn't it true that the schools received an electric deregulation replacement fund to compensate them for the loss in tax dollars to the school in light of this new methodology?

MR. ALEXANDER: Objection. The witness testified she is not aware of the Senate Bill 3 methodology, and she explained the foundation for her calculation being the 24th percent.

MS. BOJKO: She can answer if she knows, your Honor. She is, appearing on page 10 of her testimony, to state how school funding occurs in the state of Ohio and what effect that -- a closure of a plant will have on that funding.

EXAMINER CHILES: I am going to allow the question. The witness can answer it if she knows.

THE WITNESS: Could you repeat the question?

3132 1 EXAMINER CHILES: Please. 2 (Record read.) 3 I am not familiar with that. Α. 4 Ms. Murley, do you know the name of the Q. 5 school system located where Davis-Besse is located? Off the top of my head, no. 6 7 Q. Ms. Murley, are you familiar with how --8 strike that. 9 Did your IMPLAN model or -- actually strike that. 10 11 It's my understanding from your testimony 12 today that FirstEnergy provided the property category 13 on just the direct revenues from the Sammis plant on 14 Figure 6 on page 8 of your direct testimony of SM-1; is that correct? 15 16 MR. ALEXANDER: Could I have that reread, 17 please. 18 EXAMINER CHILES: Please. 19 (Record read.) 2.0 Α. If you are referring to the 5.5 million, 2.1 the answer is correct. 22 Q. Okay. Which has now been updated to 5.25; is that correct? 23 24 Yes, in the supplemental testimony. Α.

Okay. Do you know what tax rate that is

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based upon?

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- A. For Sammis?
- Q. Yes.
 - A. Not off the top of my head.
- Q. The other estimates for -- and just to clarify, the next category on that same figure for "Indirect," you estimated those property taxes, sales taxes, and income taxes for the indirect employees; is that correct?
- A. Yes.
- 11 Q. Are those based on the full tax rates or 12 the actual tax assessed to those employees?
- A. Those are estimated numbers because I

 don't know the actual property tax paid by each

 employee.
 - Q. And you don't know whether FirstEnergy's property tax figure that they provided you was based on the full tax rate or some kind of tax abatement or reduction; is that correct?
 - A. No, I understand it is the actual taxes that are paid.
- Q. And you don't know what that's based upon?
- A. I'm sorry, could you clarify?
- Q. You don't know the specific tax rate

that's based upon; is that right?

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- A. Not off the top of my head, no.
- Q. And if a generating facility would not have to pay tangible personal property tax, that would reduce the input provided by FirstEnergy in the IMPLAN model; is that correct?
- A. Just to clarify, the revenue impacts don't have anything to do with the IMPLAN model. But in the attachment to SM-1 in my direct testimony, the real and personal property taxes are broken out. So are you suggesting that the personal property tax at some point in the future would be eliminated?
 - Q. I am.
- MR. ALEXANDER: Your Honor, could we have the question.
- 16 (Record read.)
- MR. ALEXANDER: Subject to that clarification.
- EXAMINER CHILES: Would you please reread the question. Thank you.
- 21 (Record read.)
- A. For 2014, the period we are looking at,
 these are the taxes that they paid. I can't really
 comment on whether personal property taxes for public
 utilities in Ohio may be eliminated at some point in

the future.

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- Q. Well, you did update this Attachment 1 to include 2015 property taxes, didn't you?
 - A. Yes.
- Q. And my question is if personal property tax was reduced, that would correspondingly reduce your input you receive from FirstEnergy; is that correct?

MR. ALEXANDER: Objection.

EXAMINER CHILES: Grounds?

MR. ALEXANDER: The witness stated property taxes are not an input into IMPLAN so it's misleading to continue to refer to them as an input.

MS. BOJKO: It's called "Sammis plant input data" in the chart.

EXAMINER CHILES: I believe the witness said, correct me if I'm wrong, that this input was for your own purposes, for your own estimates; is that correct? Can you clarify?

THE WITNESS: Yes. So the revenue impacts were outside of the IMPLAN model, and so I used those revenue figures in my own revenue estimates.

MS. BOJKO: I will rephrase. Thank you for that clarification, your Honor.

- Q. (By Ms. Bojko) Would your estimates then need to be revised to take into consideration a reduction in the personal property taxes?
- A. For 2015, is that -- you're referring to the supplemental testimony?
 - Q. Yes.

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- A. I believe that will be the tax bill in 2015, but if I were to do an analysis for some future point in time, there could be changes in the property tax amount.
- Q. Well, 2015 isn't concluded yet. There could be changes as well going forward; isn't that true?
- A. Generally tax bills are not adjusted in the middle of the year, but I really -- I don't know what could potentially happen the rest of the year, I suppose.
- Q. So you are not aware of any legislation that was proposed that eliminates the personal property tax for two thousand -- for the future?
 - A. I'm not familiar with that legislation.
- Q. You stated earlier today that employee spending there is -- there is an assumption that the employee will actually spend the money in either the region that you looked at or the state of Ohio; is

that correct?

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- A. IMPLAN makes assumptions in the induced impacts about how much employee spending could occur within a specific geography.
- Q. Okay. And do you know how much they assume will be spent in the particular region or the state of Ohio?
- A. That's part of what's reflected in the induced impacts.
 - Q. Is there a percentage?
- A. When we are looking at employee spending, we don't assume people spend 100 percent of what they earn. There is some money that goes to taxes and other items, and so IMPLAN makes an adjustment when looking at induced impacts and the relationship between employee income and induced impacts of employee spending.
- Q. Okay. But does it also take into consideration whether they spend inside this state or outside the state?
- A. In the case of the state impacts it does account for the types of businesses that are available within the state or within the region and whether or not those purchases may occur locally or not.

- Q. So does it assume if there is a type of business, say, a car dealership in the region, that that employee will go to that car dealership and purchase a car?
- A. It assumes that at least some car purchases would be made in the region but not necessarily 100 percent.
- Q. And does it take into consideration purchases that are made over the internet?
- A. Those would be outside of the region, presumably.
- Q. And you don't know what the percentage is of what you spend in the state versus out of state?
- A. Well, it would be different for different categories of expenditures.
- Q. And that's all embedded in the IMPLAN model?
- 18 A. Yes.

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- 19 Q. And the Sammis plant is 56 years old; is 20 that correct?
- 21 A. Yes.
- Q. Did your analysis look at continuing the plant at the status quo, meaning the current operational capability of that plant?
- A. I did a point-in-time analysis.

- Q. And your analysis looked at a point in time. It did not assume any increases in jobs for ancillary business; is that correct?
- A. I looked at a particular point in time, not increases over time.
- Q. And on page 3, line 14, of your direct testimony, you talk about new business opportunities. Do you see that "spending that creates new business opportunities"?
 - A. Yes.

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- Q. You're not talking about new business opportunities with regard to the Sammis plant; is that correct?
- A. In this case since we are talking about an existing facility, it would be the existing opportunities for suppliers.
- Q. And it's your understanding that Sammis is in Stratton, Ohio; is that correct?
- A. Yes.
 - Q. And Stratton, Ohio, borders West Virginia; is that correct?
- A. I don't know without looking at a map that city actually borders West Virginia.
- Q. Does the county in which the city resides border West Virginia?

3140 I understand it's close to the border. I 1 Α. 2 don't know without looking at a map exactly where the 3 county border is. 4 MS. BOJKO: Your Honor, may I approach? 5 EXAMINER CHILES: You may. MS. BOJKO: Your Honor, at this time for 6 7 identification purposes I would like to have marked 8 as OMAEG 11. 9 EXAMINER CHILES: I believe we are at 12. 10 MS. BOJKO: Oh. EXAMINER CHILES: Thank you. So marked. 11 12 (EXHIBIT MARKED FOR IDENTIFICATION.) 13 MS. BOJKO: Thank you. Oh, 11 -- 12, 14 please. (By Ms. Bojko) Ms. Murley, do you have in 15 Q. 16 front of you what's been marked as OMAEG Exhibit 12? 17 Α. Yes. 18 MS. BOJKO: Excuse me. May we go off the forward for a minute. 19 2.0 EXAMINER CHILES: Yes. 2.1 (Discussion off the record.) 22 EXAMINER CHILES: Let's go back on the 23 record. 24 MS. BOJKO: Thank you.

(By Ms. Bojko) Does this appear to be a

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county map printed off the Ohio Department of Transportation's website?

A. Yes.

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- Q. Do you have any reason to question the reliability of the Ohio Department of Transportation?

 MR. ALEXANDER: And just to note for the record, before we get down the line, the version you gave me was highlighted. Is that everyone's?

 MS. BOJKO: Yep.
 - A. Could you repeat the question?
- Q. Does this appear to be a printout from Ohio Department of Transportation? I asked if you had any reason to question the accuracy of the Ohio Department of Transportation?
- A. Although I have not seen this document before, I have no reason to believe that the map would be incorrect.
- Q. Thank you. And, yes, as counsel pointed out, does it appear that the map has been highlighted in yellow and green?
- A. Yes, certain counties have been highlighted.
- Q. Okay. And does it appear that the yellow counties that are highlighted correspond with the four Ohio counties that are in your Sammis region,

your seven-county Sammis region?

A. Yes.

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- Q. And, Ms. Murley, does it appear that the green highlighted would reflect the location of the Davis-Besse plant being in Ottawa County?
 - A. Yes.
- Q. And although it doesn't have all the states -- I guess I should have brought you a different map given the response -- are you stating that you are still not sure of whether Jefferson County would border West Virginia?
- A. All I can determine from this map is that it is on the edge of the State of Ohio. It's not clear what is the bordering state.
 - Q. All right. Would it be a fair assumption subject to check, that it would -- Jefferson County would border West Virginia?
 - A. I really don't know.
 - Q. Okay. And what about would Pennsylvania possibly be in the vicinity as well?
 - A. I understand that Pennsylvania is nearby.

 That's why I included a Pennsylvania county in my
 region.
- Q. Okay. I mean, would you take, subject to

MS. BOJKO: Or I could pull up a map, your Honor.

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- Q. -- that Jefferson and Belmont Counties border West Virginia and that Mahoning and Columbiana border Pennsylvania?
- MR. ALEXANDER: Your Honor, we will stipulate to the map being what it is. I don't want the witness to accept that subject to check. We will stipulate to the map being what it is.
- Q. Well, you are assuming in your economic development analysis, your economic impact analysis, that these four counties would be either bordering or in -- it would have to be bordering -- the two Pennsylvania and one West Virginia county that you also took into consideration in your analysis, right?
- A. No. I'm simply assuming these are counties where employees live.
- Q. Okay. So you did an analysis of a seven-area county region for Sammis and you don't know where those counties are relative to the state of Ohio?
- A. I can see where they are. The point is that that's where the employees live.
- Q. Okay. And it's a fair assumption if the residents live in the two counties in Pennsylvania

and the one county in West Virginia that it's probably a drivable distance to Jefferson County where the Sammis plant is?

- A. Yes, I would assume it's within a reasonable commuting distance.
- Q. Do you know how many residents live in Stratton, Ohio, where the Sammis plant is?
 - A. No, I do not.

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- Q. Do you know the size of Stratton, Ohio?

 Is it a small city? A large city? Do you have any kind of understanding?
 - A. Do you mean the geographic size?
 - Q. The population size.
- A. I understand that it's not a large city, but I don't know the exact population.
- Q. So you wouldn't be surprised to hear that through a 2010 census that there were only 294 residents in Stratton, Ohio?
 - A. No, that does not surprise me.
- Q. And your report states that 73 percent of the employees from Sammis live in either Jefferson County or Columbiana County; is that correct?
- A. Yes.
- Q. Did FirstEnergy provide the residential status of its Sammis employees to you to make those

statements in your report?

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- A. They gave me a general idea of where the employees commute from.
- Q. Well, who provided you the data on Figure 3 of SM-1?
- A. Those percentages were provided by FirstEnergy.
 - Q. So the number of employees as well as the percentages were calculated by FirstEnergy?
 - A. I was able to estimate the number of employees.
 - Q. So FirstEnergy provided you the percentages of employees, and then you took the number of plant employees and calculated the actual number of employees residing in each county?
 - A. The estimated number, yes.
- Q. So I don't see the number of employee residents, the actual resident percentages by county on Attachment 1, but this would be an additional input or piece of data that was provided by FirstEnergy; is that correct?
- A. I believe that should have been included in Attachment 1. That was my omission.
- Q. And you state that the -- if you look at SM-1 of -- well, let's look at your SM-1 on the

direct. I was trying to get you a correlating page for the updating, and it's a little different, so let's look on SM-1, page 9. Here the average income per direct and indirect employee is 63,600; is that correct?

A. That's what it says.

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- Q. Okay. And did FirstEnergy provide you that data?
- A. No. I divided personal income by the number of employees using the results of my IMPLAN analysis.
- Q. So you took the number of employees provided by FirstEnergy and the total payroll and you divided it to give an average income; is that correct?
- A. Not exactly. This includes indirect and induced employees as well.
- Q. So you took -- I apologize. Thank you for the clarification. You took the payroll of the Sammis plant and you added the contractor labor cost, and then you divided that by the total number of direct employees, which includes Sammis employees and contractors, to get an average income; is that correct?
 - A. No. So if you look at Figure 5 on page 7

of the direct testimony, SM-1, I took the 67.32 total personal income of Sammis employees and contractors, indirect workers, induced workers, all totaled the 67.32, divided by the 1,059 total jobs direct, indirect, and induced.

- Q. Just for clarification on the record, I think you were looking at Figure 5 in the supplemental testimony; is that right?
 - A. No, in the direct.
- Q. You were in the direct testimony? So as I understand your testimony, then, to get an average income of direct and indirect employees, you took all of the employees and divided by the payroll provided by FirstEnergy as well as the induced employee impacts and the supplier impacts; is that right?
 - A. Yes.

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- Q. And, Ms. Murley, you are not assuming in your analysis that the contractors cannot find or will not retain their jobs with their current contractors, are you?
- A. I'm sorry. Do you have a reference for that?
- Q. Well, no. I am just trying to understand your model that you did. You told me earlier that you assumed that those -- that the jobs would be lost

if Sammis was closed, and I am asking if you believe that the contractor -- that the individuals working for the contractors will lose their jobs if the Sammis plant closed.

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- A. Are you referring to the 140 contract employees that perform routine maintenance on the plant?
- Q. That are not employed directly, that are independent contractors. They work for a separate contracting firm, yes.

MR. ALEXANDER: Could I have that clarification be reread because I think contrary?

MS. BOJKO: I'm sorry, I will clarify.

- Q. The 140 contractor jobs that you -- they don't work directly for FirstEnergy. They are not paid by FirstEnergy; isn't that correct?
- A. They are paid by FirstEnergy, just not as part of the payroll.
- Q. Right. They are not directly employed by FirstEnergy. They are directly employed by a separate company; isn't that correct?
 - A. Or they are self-employed, yes.
- Q. Okay. So if the Sammis plant closes, those contractors that are not employed by FirstEnergy would not necessarily lose their jobs.

They will still work for their same company or be employed by themselves; isn't that correct?

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- A. They will no longer be doing maintenance on the Sammis plant or receive the money we are assuming they are receiving for doing maintenance on the Sammis plant.
- Q. Right. But they could do maintenance jobs somewhere else, isn't that true, for different manufacturing companies?
- A. In the same way that any of the former Sammis employees could find other jobs, I assume these contractors may also find other jobs in the event of a plant closure.
- Q. And those local contractors or the induced impact, the supplier jobs that you also considered, those could be located outside of the state of Ohio when you are looking at the seven-region analysis for the Sammis plant; is that correct?
- A. In the seven-county region analysis, some of the induced impacts could be occurring outside of Ohio.
- EXAMINER CHILES: Let's go off the record for a minute.
- 25 (Discussion off the record.)

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                   EXAMINER CHILES: Let's go ahead and take
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      a lunch break then. We'll return at 2 o'clock.
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                   (Thereupon, at 1:00 p.m., a lunch recess
      was taken until 2:00 p.m.)
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3151 1 Monday Afternoon Session, 2 September 21, 2015. 3 4 EXAMINER CHILES: Let's go ahead and go 5 back on the record. Ms. Bojko. 6 7 MS. BOJKO: Thank you. 8 9 CROSS-EXAMINATION (Continued) 10 By Ms. Bojko: Good afternoon, Ms. Murley. Right before 11 Ο. 12 the break we were discussing the median income of employees for the Sammis plants. Do you recall that? 13 Α. 14 Yes. And that was on page 9 of SM-1 attached 15 Q. 16 to your direct testimony; is that correct? 17 Α. Yes. 18 Q. Okay. And the number is 63,600; is that 19 right? 20 Α. Yes. 2.1 Ο. Okay. And you didn't update that number 22 in your supplemental testimony, did you? I didn't quote an exact number in my 23 Α. 24 supplemental testimony SM-1, but I would have updated 25 that calculation.

Q. Well, I am trying to figure out your testimony. You can help me, and that was part of my confusion before the break, so I apologize. I thought SM-1 was an exact replica of SM-1 -- SM-1 in your supplemental testimony was an exact replica of SM-1 in your direct testimony except for the updated numbers from 2014 to 2015. Is that not correct?

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- A. The way that I calculated all of those revenues is the same. I mean, the rates, tax rates, could have changed, but the way that I did all the calculations would be the same. I may have slightly modified the text, but I did not change the way I did the calculations.
- Q. Right. No. I am trying -- the reports are not the same, so SM-1 attached to your supplemental testimony does not replace SM-1 attached to your direct testimony, correct?
- A. I'm looking at plant impacts in two different years using inputs for two different years.
- Q. So the answer is no, they don't replace. You have attached to your testimony, you have SM-1 -- SM-1 attached to your direct testimony, SM-2 attached to your direct testimony and then you subsequently have an SM-1 attached to your supplemental testimony and SM-2, 3, and 4 attached to your supplemental

testimony; is that correct?

- A. Yes, I have those attachments.
- Q. Okay. So SM-1 -- Attachment SM-1 and Attachment SM-2 do not completely replace Attachment SM-1 attached to your direct testimony and SM-2 attached to your direct testimony; is that correct?
 - A. Yes. They represent updated versions.
- Q. Okay. And before the break we were discussing the \$63,600 as the average income, and you explained to me that it was a calculation of direct and indirect employees; is that correct?
- A. I used the total personal income and total employees to come up with that number.
- Q. Okay. And the total employees that you just referenced, that includes the employees at the Sammis plant and that includes local contractors; is that correct?
- A. By local contractors are you referring to the induced jobs in Figure 5 on page 7 of SM-1 in the direct testimony -- I'm sorry, indirect.
- Q. That's what I thought you told me that it included, so why don't you tell me what employees what direct and indirect employees means to you that you consider to arrive at this calculation.
 - A. So the direct employees on Figure 5 of

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page 7 of SM-1 of the direct testimony are

FirstEnergy -- people that work at the plant,

FirstEnergy employees, and contractors that perform

regular maintenance on the facility.

The indirect job impacts, which in this case is 363 are people that work at businesses that sell goods and services to the Sammis plant. The 160 induced jobs are people that work at retailers and service providers, primarily businesses that sell goods and services to the employees.

- Q. Are you finished?
- A. Yes.

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- Q. And the indirect that you just read, the 363, as well as the induced, the 160, you're not assuming in your analysis that all of those suppliers only supply facilities to the Sammis plant, are you?
 - A. Do you mean supply goods and services?
- Q. I'm sorry, strike that, yes. Only supply -- you are not suggesting that the 363 and the 160 indirect and induced jobs that you just cited only provide services to the Sammis plant, are you?
- A. So there could be suppliers where some of their employees work on providing services to the Sammis plant and some of them do other things and we're only counting the share that work on providing

services to the Sammis plant.

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- Q. But when you talked about induced impacts, you talked about businesses that might provide services to local contractors or suppliers or employees, right?
- A. The induced jobs represent people that work at businesses that sell goods and services to the employees.
- Q. Okay. And those businesses that sell goods and services to employees do not only sell goods and services to Sammis plant employees, do they?
- A. No. But this represents the share of their employees that would be attributed to the demand created by Sammis employees.
- Q. You're not suggesting that the businesses, the entire businesses, that house these employees that do work for Sammis would go out of business if Sammis goes out of business; is that correct?
- A. I can't really comment on whether individual businesses would stay in business or not.

 I'm only counting the incremental amount of their employees and payroll that are attributed to the demand created by Sammis.

- Q. Well, what is -- can you provide me an example of one of the businesses that you are referencing right now that falls under the induced employee impact analysis?
- A. I could give you the example of a grocery store. So perhaps, just for the sake of example, 10 percent of the sales of the grocery store are made to employees of the Sammis plant or employees of their suppliers, so we're counting 10 percent of the income and payroll associated with that grocery store in the induced impacts.
- Q. So under that assumption, if the employee no longer works at Sammis, he has to leave or your assumption is he will leave the county or the region where he purchases groceries; is that your assumption then?
 - A. No.

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Q. Well, you just said you take into consideration 10 percent being sold to an employee of Sammis, and if you count that -- that money is lost if that person no longer works at Sammis, then you are assuming that he moves out of the county or state of Ohio depending on the analysis; isn't that correct?

MR. ALEXANDER: Could I have that

question read, please?

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EXAMINER CHILES: You may.

(Record read.)

- A. If the plant were to close, that person is no longer able to use their income from their FirstEnergy job at the Sammis plant to make purchases because they are not receiving that income anymore.
- Q. Right. But that person may receive income from another source and may continue to shop at that grocery store; isn't that true?
- A. Yes. But then it is no longer related to the closure of the Sammis plant.
- Q. Well, it's no longer lost if the Sammis plant closes, isn't that correct?
 - A. They've replaced their income with a new job. It doesn't mean that there was net growth or not a net loss.
- Q. Well, it's not a net loss to the grocery store if that individual continues to spend 10 percent of his income at that grocery store; isn't that true?
- A. It's no longer attributed to the Sammis plant.
- Q. It's no longer a loss to the Sammis plant; isn't that correct?

MR. ALEXANDER: Objection. Two grounds, 1 2 one to the extent counsel intended to say Sammis 3 plant in that question. I believe counsel misspoke, 4 so I am objecting on the ground of vague; and, two, 5 the counsel didn't say which grocery store in that question, then objection, asked and answered. 6 7 EXAMINER CHILES: Could we have the 8 question read back. 9 MS. BOJKO: I will rephrase, your Honor. 10 I did not mean to say it if I did, so let me try 11 again. 12 EXAMINER CHILES: Thank you. 13 Q. (By Ms. Bojko) It is no longer a loss 14 attributed to the Sammis plant closure if the employee continues to spend 10 percent of his income 15 16 at that grocery store; isn't that true? 17 MR. ALEXANDER: Objection, asked and 18 answered.

examiner Chiles: The objection is overruled. You are talking about an employee continuing to spend 10 percent of the income, was that part of the hypothetical, 10 percent at the grocery store?

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MS. BOJKO: That's what the witness said, 10 percent of his income was spent on the grocery

store.

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EXAMINER CHILES: Okay. Could we have the question reread for the witness. The objection is overruled.

(Record read.)

- A. The hypothetical was that 10 percent of the grocery store's sales were to Sammis employees. To answer your question, the way that economic impact analysis works, it looks at the impacts of respending the personal income, in this case, that people earned at Sammis. If they are now spending some other money that they got from some other source, then it's no longer part of the impact that we're looking at.
- Q. Thank you for the clarification. But it is also no longer a loss attributed to the Sammis plant if the 10 percent of the sales is still -- still exists, right?
- MR. ALEXANDER: Objection. Asked and answered.

20 EXAMINER CHILES: Sustained.

Q. Before lunch you testified -- did you testify that your assumption is that local contractors -- local utility contractors would not find other work? Did you testify to that before lunch?

- A. Are you referring to the 140 contractors that perform maintenance on the facility?
 - Q. Yes, yes.

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- A. I'm simply assuming that they are no longer working at the Sammis plant.
- Q. And isn't it true that utility contractors, those local maintenance contractors, typically work at other utilities?
 - A. I really don't know.
- Q. Isn't it true that there is another coal plant located in Jefferson County?
 - A. I don't know.
- Q. Isn't it true that there is a coal plant located in Coshocton County, which is two counties away from Jefferson County?
 - A. I don't know.
- Q. Isn't it true that there's a Muskingum coal plant in Washington County, which is three counties away from Jefferson?
- A. I don't know.
- Q. You do know there are several coal plants located in the state of Ohio, do you not?
 - A. Yes, who already have employees.
- Q. And who use local contractors that are certified by utilities to do utility contract work;

isn't that correct?

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- A. I couldn't comment on the operations of those other plants.
- Q. Well, I didn't ask you about other plants. I asked if the local utility contractors that are certified by the utilities to perform work perform work at more than one coal plant?

MR. ALEXANDER: Objection. Are we referring to the 140 full-time equivalent contractors listed in direct outputs or the direct supplier impacts?

12 EXAMINER CHILES: Can you clarify?

MS. BOJKO: The witness was already asked that clarification, and she said the 140 local contractors.

EXAMINER CHILES: Can you just reask that question with that clarification?

- Q. (By Ms. Bojko) Isn't it true that the 140 local contractors perform utility work and are certified to perform utility work at more than one utility company?
 - A. I don't know.
- Q. It's a possibility, is it not?
- A. I don't know. I really can't comment on that.

Q. Have you ever had the opportunity to work with independent contractors?

- A. In my own job?
- O. Yes.
- A. Yes.

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Q. Do you have one client, Ms. Murley, or do you have several clients?

MR. ALEXANDER: Objection. We are well afield of the witness's testimony at this point.

MS. BOJKO: Your Honor, may I be heard?

EXAMINER CHILES: Yes.

MS. BOJKO: This is directly applicable to her recommendations and her assumptions that she took in the modeling, and she's making assumptions about independent contractors, and I have -- I am attempting to understand her assumptions and seek an understanding to that, I guess.

EXAMINER CHILES: The objection is sustained. I think we are getting beyond the scope here.

- Q. (By Ms. Bojko) Do you know what the median income is for Jefferson County, Ms. Murley?
 - A. Not off the top of my head, no.
- Q. Do you know what the median income is for Columbiana County?

- A. Not off the top of my head, no.
- Q. Let's go to page 5 of your direct testimony, please. I want to understand some of the updates that you've made with your supplemental testimony. If we start with line 11 -- or I'm sorry, 10, it starts on line 10. It says, "Sammis employs approximately 400 regular employees" -- and that number has now been updated to 342; is that correct?
 - A. Yes.

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- Q. And then you say there's an annual payroll of approximately 30 million and that number has been increased to 36 million with the reduction in the number of employees; is that correct?
- A. I believe the number in the direct testimony is 34 million.
- Q. In the supplemental testimony is that 34 million increased to 36 million?
 - A. Yes.
 - Q. And on line 2, the 140 full-time equivalent contractors, that's the same in your supplemental testimony, is that accurate?
 - A. Yes.
- Q. And the estimated payroll of those contractors remains the same in your testimony of 11.9 million; is that correct?

- A. It's rounded. The exact number in the attachments is slightly different, but both would round to 11.9 million.
- Q. And we've already discussed on line 14 that the property tax went from 5.5 million to 5.25 million with the updated 2015 numbers; is that correct?
 - A. Yes.

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- Q. And if we go to the next paragraph, on line 17, the total economic impact has increased in the supplemental testimony to 602.2 million; is that correct?
- A. Can you give me a reference in the supplemental testimony?
 - Q. It is on page 6, line 14.
 - A. Can you repeat the question, please?
- Q. Sure. Well, let's step back. I am assuming that the line 17 in your direct testimony regarding the total economic impact of 585.6 million is only for the seven counties so the regional impact; is that correct?
 - A. Yes.
- Q. Okay. So to me the corresponding number in your supplemental testimony on page 6 for the regional impact only is 602.2 million; is that

correct?

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A. Yes.

- Q. And the direct and indirect supporting jobs on line 18 of page 5 of your testimony has decreased in your supplemental testimony to 1,047 jobs; is that correct?
- A. Do you have a reference in the supplemental testimony?
 - Q. It is on page 3, line 21.
 - A. So the 1,100 jobs in the direct testimony on page 5, line 18, corresponds to the 925 jobs in the supplemental testimony on page 3 in line 23.
- Q. Thank you for that clarification. The 1,047 jobs equates to the whole state of Ohio; is that right?
- 16 A. Yes.
 - Q. In the new supplemental you did two analyses, one for the state of Ohio and one for the region; is that right?
 - A. Yes.
- Q. Okay. Thank you for that clarification.

 And those 925 jobs have an annual payroll of

 74.24 million in the new supplemental testimony; is

 that right? Oh, no, strike that. That's in the

 state. Thank you. 64.7 million, is that the

corresponding number?

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- A. Yes.
- Q. Thank you. And the payroll assumptions for these jobs are not done through IMPLAN; these are your calculations and your assumptions, estimates; is that correct?
- A. The direct personal income, if we are talking about, for example, Figure 1 on page 4 of the supplemental testimony, the direct personal income was information provided to me by FirstEnergy. The indirect and induced personal income are coming from IMPLAN, the result of applying the multiplier.
- Q. And is your answer the same for the state of Ohio analysis as well?
- A. Yes, using different multipliers for the state of Ohio.
- Q. Davis-Besse is 38 years old; is that correct?
- 19 A. Yes.
- Q. And the plant is located in Oak Harbor,
 Ohio; is that correct?
- 22 A. Yes.
- Q. And Oak Harbor is located in Ottawa
 County; is that correct?
- 25 A. Yes.

1 And is Oak Harbor 20 -- approximately 0. 2 21 miles from Toledo? 3 Yes. Α. 4 Approximately 80 miles to Michigan? 0. I don't know. 5 Α. Do you know how many residents reside in 6 Ο. 7 Oak Harbor? 8 Α. No, I don't. 9 Isn't it true that Oak Harbor has a Ο. 10 municipal electric company and is a member of AMP-Ohio? 11 12 Α. I don't know. 13 Ο. And on OMAEG-12, the map, Ottawa County 14 where the Davis-Besse plant is located is highlighted in green; is that correct? 15 16 Α. Yes. 17 Q. And you have received an input from 18 FirstEnergy that explains that 39 percent of the employees of the Davis-Besse plant live in the 19 2.0 county; is that correct? 2.1 Do you have a reference for that? 22 Page 6, SM-2, I believe, of the direct, Q. the first SM. 23 24 Α. Yes.

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Q.

And on page 11 of your Davis-Besse

report, SM-2 attached to your direct, the average income of the direct and indirect employees is 95,000; is that correct?

A. Yes.

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- Q. And similar to the average income figure for Sammis, you did not update this average income figure in the supplemental testimony; is that accurate?
- 9 A. I updated it. I don't know if I quoted 10 it in the text.
- Q. So the text may be similarly different in SM-2 regarding this issue as it was for Sammis; is that correct?
 - A. Actually, the 95,000 average lies in SM-2 of the supplemental testimony also.
 - O. On which page?
 - A. Page 11 at the top of SM-2.
- 18 Q. Thank you. And you don't know what the
 19 medium household income is for Ottawa County; is that
 20 correct?
- 21 A. That's correct.
- Q. And for Davis-Besse you used an
 assumption that 29 percent of the employees' wages
 would be spent on goods in the county; is that
 correct?

- A. Spent on goods subject to sales tax.
- Q. And for Sammis you used an assumption that 31 percent of the employees' wages would be spent on goods; is that correct?
- A. We are talking about the direct testimony?
 - Q. Yes.

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- A. Yes.
- Q. And, Ms. Murley, you would agree with me an increase in electricity prices to energy-intensive customers would affect manufacturing productivity, wouldn't you?
- A. That's outside of the scope of what I analyzed.
 - Q. So you did not analyze the effect of increasing a customer's price of electricity and how that will affect that customer's business in your modeling?
 - A. No, I did not.
- Q. Did you analyze how that will affect that customer's reinvestment in their business and in the economy?
- MR. ALEXANDER: Objection, asked and answered.
- MS. BOJKO: It's a different question,

1 your Honor.

2 MR. ALEXANDER: Mr. Fisk, earlier, not

3 Miss Bojko.

4 EXAMINER CHILES: I will allow the

5 question.

6 THE WITNESS: Could you repeat the

7 | question?

8 EXAMINER CHILES: Would you please repeat

9 it.

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10 (Record read.)

- 11 A. I did not look at the costs or benefits
 12 associated with changes in utility prices.
- Q. And so is it fair to assume you did look
 at a customer's community contributions in your
 analysis if their -- increase of their product -- or
 if there is an increase in the price of their
 product?
 - A. Could you define "community contributions"?
 - Q. Sure. You didn't look at the -- how an increase in electric prices to a customer and the corresponding increase in the price to produce the product, how that would affect a business's ability to donate or contribute to the community financially?
 - A. No, that was outside the scope of my

analysis.

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Q. Did you analyze the effect on the economy if all customers have to pay more for electricity in order to keep the plants operating?

MR. ALEXANDER: Objection, assumes facts not in evidence.

MS. BOJKO: I said "if."

EXAMINER CHILES: I agree. Overruled.

THE WITNESS: Could you repeat the

10 question.

11 (Record read.)

- 12 A. I did not analyze the impacts of costs or
 13 benefits associated with changes in electricity
 14 prices.
- Q. Have you analyzed how favoring one
 generator by providing them with revenue over another
 generator will affect the competitive market in the
 region?
- MR. ALEXANDER: Objection, assumes facts not in evidence.
- 21 EXAMINER CHILES: Sustained.
- Ms. Bojko, could you rephrase your

23 question?

MS. BOJKO: Sure.

Q. (By Ms. Bojko) I believe you said to

Mr. Fisk this morning that you're aware that the application presented in front of the Commission creates a rider where the costs of these generating units are passed on to customers if there are costs that exceed the revenues.

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- A. I'm not familiar with all the details of the application. Could you be more specific?
- Q. Sure. You're familiar that if the plants keep operating, FirstEnergy's requesting the Commission allow it to pass on the net costs of operating these plants on to customers?
- A. I'm familiar with the fact that FirstEnergy predicts a \$2 billion net benefit over the term of the PPA as shown in their application.
- Q. And are you also aware that for the first three years of the projection that you just referenced that it's a negative 400 -- approximately \$464 million detriment in costs to customers?
- A. I did not look at the impacts of costs or benefits to customers.
- Q. Well, you just said you were aware of a potential benefit to customers. Are you aware that there is a potential cost to customers?
- A. At the time of my deposition I was not aware of that, but at this time I am -- I am aware of

that but not familiar with the details.

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Q. Are you aware that generation in Ohio is competitive?

MR. ALEXANDER: Objection, beyond the scope of the witness's testimony. She has already testified she did not take into account the costs or the benefits of these projections so I think we are well afield at this point.

MS. BOJKO: Your Honor, she's testifying to the economic development effects in Ohio of closing a plant. We are exploring whether she's looked at other issues that could affect the economics of the region or state of Ohio by this transaction.

EXAMINER CHILES: The objection is sustained. I think we are beyond the scope at this point.

- Q. (By Ms. Bojko) Did you review or analyze the stipulations that were filed in this case with respect to your economic impact analysis?
 - A. No.
- Q. And the IMPLAN model is called column standardized and it only captures impacts of the expenditures of the supply chain on the industry and on the supply chain of the suppliers' industries; is

that correct?

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- A. Yes. Economic impact analysis is based on who buys what from whom as opposed to who sells what to whom.
- Q. And the IMPLAN model has fixed coefficients; is that correct?
- A. The IMPLAN model has fixed coefficients in that it doesn't assume changes in production functions over time, which didn't matter for our analysis because it was a point-in-time analysis.
- Q. And isn't it true that the IMPLAN model does not capture substitution effects or customer price sensitivities?
- A. Yes. The IMPLAN model doesn't capture changes. That's based on being a fixed coefficient model.
 - Q. But it also does not capture substitution effects, right?
 - A. Yes. That would fall within the definition of being a fixed coefficient model.
- Q. Okay. And then, I guess, similarly, falling within that same definition, you believe that customer price sensitivities were not considered in the IMPLAN model.
- A. No, but they weren't relevant to my

FirstEnergy Volume XV 3175 1 point-in-time analysis. 2 And right now I am talking specifically 3 about the IMPLAN model, not your total analysis. The 4 IMPLAN model does not take customer price 5 sensitivities in account when it produces its outputs; is that correct? 6 7 Α. Yes. 8 MS. BOJKO: Okay. Thank you, your Honor. 9 I have no further questions. 10 Thank you, Ms. Murley. 11 EXAMINER CHILES: Thank you, Ms. Bojko. 12 Mr. Dougherty. 13 MR. DOUGHERTY: No questions. 14 EXAMINER CHILES: MR. Hayes. 15 MR. HAYS: Just a few. 16 17 CROSS-EXAMINATION 18 By Mr. Hays: 19 Can you see? Okay. It's always kind of Q. 2.0 an awkward position here. 2.1 Yes, I can. Thank you. 22 MR. HAYS: Tell you what we'll do. Give 23 us a moment, your Honor.

A little better for eyesight?

Yes, thank you.

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Α.

Q. Ms. Murley, I am Tom Hays. I am counsel for the Northwest Ohio Aggregation Coalition called NOAC and it's communities, like Toledo, Lucas County that are in the area. I hope you had a good flight out here. I imagine it's a little greener in Ohio than out in Arizona.

A. Yes.

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- Q. Great. There were a lot of questions asked, and I just want to simplify them down. Have you ever been to the Davis-Besse plant up in Oak Harbor?
 - A. No.
- Q. I will put a pitch in for the region. They have a Jet Express that takes you out to the world's largest horseshoe bar on an Erie island called Put-in-Bay, quite famous with college students.

Have you ever been over to the Sammis plant on the Ohio River?

- A. No.
- Q. Also a great area. If I am understanding your testimony correctly, if the Sammis plant doesn't close, then the effects listed on SM-3 won't occur? That would be to your supplemental testimony.
- A. That's correct.

- Q. And, similarly, if Davis-Besse closes, then the effects listed in SM-4 won't occur?
 - A. Could you repeat the question?
- Q. Yeah. I may have gotten screwed up there, too many letters and numbers for me. If the Davis -- excuse me. If the Davis-Besse plant does not close, then the effects that are listed in SM-4 will not occur? And that's to your supplemental testimony.
 - A. Correct.

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- Q. Okay. Did any of the people you spoke to at FirstEnergy or its subsidiaries ever tell you that there was a -- there were forecasts from the EPA and others that due to changes in regulations, there would be plant closures in the electric industry, meaning generation plants?
 - A. No.
- Q. Let us assume there are other coal-fired electric plants in Ohio. If one of those were to close, would there be -- understanding there's a difference in scale for the number of employees -- is it the input model? It's called what again?
 - A. TMPTAN.
- Q. Oh, I'm sorry. If another coal-fired plant in Ohio were to close and the data were put

into IMPLAN, understanding there might be a difference in scale, would it show similar bad effects on the local economy?

- A. Yes, although those effects would vary depending on the location and size of the plant.
- Q. Yes, and the kind of factors you described earlier in your testimony --
 - A. Yes.
 - Q. -- is that correct?
- 10 A. Yes.

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- Q. Were you ever asked to look at Ohio as a whole and what kind of plants might stay open and which ones might close?
- A. No. I was only asked to look at the specific plants Sammis and Davis-Besse.
 - Q. I take it from your testimony you are not an expert in the electric -- in the world of electrical transmission or electrical generation?
 - A. No, I am an expert in economic impact analyses.
- Q. Okay. Are you an expert in where plants -- where electrical plants may open?
- 23 A. No.
- Q. I think at one point you testified that the plants -- that if a plant -- an electric plant

closed, that a new plant would not open at the same location or nearby location.

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- A. I said that it would be less likely that a new plant would open in the same location as the plants that closed.
 - Q. And what's your basis for saying that?
- A. Historically I don't think it has come up with an example where a utility plant closed and built the exact same plant on the same site.
- Q. Are you aware there can be conversions of coal plants to electric plants -- excuse me -- coal-fired plants to gas-fired plants at the same location?
- A. Without building a new plant; is what you're saying?
- Q. Yes. I am just saying they would convert the equipment they needed to convert.
- A. I am not familiar with that for generation plants.
- Q. Okay. Did anybody at FirstEnergy tell you that they had closed a unit -- closed four coal-fired units in the city of Oregon, Ohio?
 - A. No, I was not aware of that.
- Q. Did anyone at FirstEnergy, meaning the company or any of its affiliates, tell you that there

was a new combined gas cycle plant being built in Oregon, Ohio?

A. No. I was not aware of that, although it would not have affected my analysis.

MR. HAYS: Okay. I have no other questions. But I do hope you get a chance to get up to Oak Harbor. It's truly a great bar and where Perry won the great Battle of Lake Erie against the British. Thank you.

EXAMINER CHILES: Thank you, Mr. Hayes.

11 Mr. Stinson?

MR. STINSON: Yes.

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CROSS-EXAMINATION

By Mr. Stinson:

Q. Just a few questions to clarify,
Ms. Murley. I believe in your conversations with
Ms. Bojko earlier today you stated that in your
supplemental analyses, you considered the -- the
effects of dormancy in a plant for Davis-Besse?

- A. You are referring to decommissioning?
- Q. Right.
- A. Yes, I did.
- Q. And that's what you've indicated on SM-4, your supplemental attachment, page 6?

- A. In section 3.5, yes.
- Q. Thank you. And I believe earlier in your testimony you were conversing with Mr. Fisk and indicated that in your initial analyses, you looked at the category or selected a category for electric power generation; is that correct?
 - A. In my direct testimony, that is correct.
- Q. And then I believe in your supplemental you selected categories for both fossil fuel and nuclear, correct?
- 11 A. One for Sammis and one for Davis-Besse,
 12 yes.
 - Q. The nuclear being Davis-Besse?
 - A. Yes.

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- Q. And in your initial testimony, your direct testimony, you did not include any decommissioning analyses, correct?
- A. I did not include any analysis of closure or decommissioning.
 - Q. And is the basis for that because of the different categories selected?
 - A. No.
- O. What was the basis for that?
- A. Could you clarify?
- 25 Q. I am just asking why you included the

effect of decommissioning in supplemental testimony but not in your initial.

- A. I was asked to update my reports and prepare closure analyses for both plants in response to a recent Commission decision.
- Q. And so what would be the reason why you included decommissioning in the supplemental testimony and analyses but not the first?
- A. I didn't look at the impacts of closing the plants in the direct testimony. It was simply the impacts of keeping the plants -- their current operations, so decommissioning wasn't relevant to the current operations.

MR. STINSON: Okay. Thank you. That's all.

16 EXAMINER CHILES: Thank you.

Mr. Moore?

18 MR. MOORE: Yes.

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20 CROSS-EXAMINATION

21 By Mr. Moore:

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Q. Hi, Ms. Murley. I am Kevin Moore from the Ohio Consumers' Counsel.

If you could turn to page 1, line 15, of your direct testimony. It says there you "have

constructed a large number of economic and fiscal
impact models"; is that correct?

A. Yes.

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- Q. For purposes of this proceeding you did not construct a fiscal impact model; is that right?
 - A. That's correct.
- Q. Instead you were asked to conduct an economic impact study, right?
- A. Yes, and we also included revenue impacts.
- Q. But a fiscal impact study is different than an economic impact study; is that right?
 - A. Yes, it is.
 - Q. A fiscal impact model will estimate revenues and expenses of a project, correct?
- A. Not of a project. Revenues and expenses to a local government, in this case a business operation.
 - Q. So revenues and expenses of an operation then?
- A. To clarify, it's not the revenues to the company or their expenses. It is, for example, taxes and fees paid to a local jurisdiction and costs for police service and public works and things like that.
 - Q. So, in other words, it will estimate the

financial impact of a project on a given region or operation on a given region; is that right?

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- A. On this subject it would show the impact on the subject government budget.
- Q. Okay. So would that be -- would a fiscal impact model be considered a cost/benefit analysis?
- A. A fiscal impact model is not typically the way a cost/benefit analysis is performed.
- Q. But it will show revenues and impact -revenues and expenses or costs of a project to a
 government or municipality, correct?
- A. Only to that government's budget, not to any other parties that may receive benefits of a project.
- Q. Okay. But an economic impact model does not considered cost and expenses to the community as a fiscal model would.
- A. An economic impact model is different from a cost/benefit analysis and also different from a fiscal impact.
- Q. Okay. So that an economic impact model just includes benefits; is that right?
- A. Effectively, yes, but it's really a different approach.
 - Q. Right. So an economic benefit is not a

cost/benefit analysis either, right?

A. That's correct.

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- Q. In other words, the economic impact model only presents favorable effects and will omit unfavorable effects?
- A. An economic impact looks at how expenditures made by an entity create jobs and income in other industries. A cost/benefit analysis considers the cost of using a resource and who pays that cost and who might benefit from that and how that compares to who's paying the cost. It's really an entirely different approach.
- Q. Okay. But wouldn't an economic impact model, like the one you are presenting in this proceeding, would that show any unfavorable effects?
 - A. Economic impacts are always positive.
- Q. So that's no, the answer to my question is no then?
 - A. Could you repeat your question?
- Q. An economic impact model, like the one you are presenting in this proceeding, doesn't present any unfavorable effects or negative effects; is that correct, only what's present favorable or a benefit?
- 25 A. I would hesitate to use the word

"favorable." I would prefer the word "positive."

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- Q. Okay. So an economic impact model only presents positive effects; is that correct?
 - A. Economic impacts are always positive.
- Q. Okay. I think you stated earlier to, maybe, one or two other counsel that you did not include electricity prices in your economic impact study, correct?
- A. I did not look at the cost or benefits of changes in electricity prices.
- Q. But it is possible to do an economic impact analysis on the increased utility rates on the economy?
- A. It is possible, but a more appropriate approach would be a cost/benefit analysis.
- Q. If a utility price increased, would this create direct economic impact?
- MR. ALEXANDER: Objection. With what she just testified, she didn't do that analysis.
- 20 EXAMINER CHILES: I will allow the
 21 question. The witness can answer appropriately if
 22 she did the analysis.
- THE WITNESS: Could you repeat the question?
- 25 EXAMINER CHILES: Could you reread it,

please.

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(Record read.)

- A. So in your hypothetical example, can we use the example of households?
- Q. My question pertains to if utility prices increase, would it create a direct economic impact under the same circumstances you presented in your -- in your economic impact study in this proceeding?
- A. I don't have enough information to answer that question.
- Q. Okay. In a hypothetical economic impact to the state of Ohio, if the utility prices increase, would that create a direct economic effect on the state?
- MR. ALEXANDER: Objection, incomplete hypothetical.

EXAMINER CHILES: Sustained.

- Q. What more information do you need to complete the hypothetical?
- A. Utility price changes impact different classes of customers differently.
- Q. How would a utility price increase impact residential customers?
- A. So in your hypothetical, are you assuming that they are paying more for utilities but their

income and overall spending didn't change, they just had to reallocate their expenditures?

Q. Yes.

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- A. So since their overall spending didn't change but spending in different industries creates different magnitudes of impact, it's not clear whether the impact would be positive or negative from an economic impact perspective.
- Q. So you can't tell whether there would be a direct impact?
- A. There are impacts of household spending.

 I just can't tell whether it would be greater or

 lesser if they are spending more money on utilities

 and less money on other things.
- Q. But if utility prices did increase, customers would have to spend less money elsewhere; is that right, if they would have to reallocate what money they do have?
- A. Assuming their income remained the same and they are spending more on utilities, they would have to spend less on other items, but their total spending would not change.
- Q. And you didn't include this analysis in your economic impact study in this proceeding, correct?

A. No, I did not look at the impact of changes in prices or the benefits.

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- Q. Is it possible to decipher from your study whether the spending that we -- that you spoke about earlier with Ms. Bojko proposed for the plants, the \$464 million in the first three years, whether that spending has a greater economic impact than if the same amount of money was spent on something else in the same area?
- A. No. That type of comparison is exactly what a cost/benefit analysis is designed to answer.
- Q. Okay. Just to be clear, you didn't include that in this proceeding, correct?
 - A. I did not do a cost/benefit analysis.
- Q. Ms. Murley, have you ever worked with the Regional Economic Model, Inc. or REMI?
- A. I am familiar with REMI models. I am not a user of the REMI model, but I am certainly familiar with them.
- Q. So you understand the nature of this modeling then, correct?
 - A. I understand how it functionally differs from IMPLAN, for example.
- Q. Did you run an REMI model in preparing for this proceeding?

A. No. I chose IMPLAN because it's very widely used and widely respected by federal government agencies and universities, and it is a model I felt was the most appropriate choice and also with which I have expertise.

- Q. Did you run any other types of models besides the IMPLAN model?
- A. No. That was the model I felt would be the best choice for this analysis.
- Q. Are you familiar with the recent study by REMI sponsored by the National Rural Electric

 Cooperative Association that studied the impact of 10 percent to 25 percent electricity price increases in terms of lost jobs and gross domestic product?

MR. ALEXANDER: May I have that question reread, please?

17 EXAMINER CHILES: You may.

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(Record read.)

- A. I am not familiar with that study so I cannot comment on the results.
- Q. Are you aware of the key assumptions that IMPLAN uses?
 - A. Could you be more specific?
- Q. You spoke earlier that IMPLAN uses certain assumptions to produce outputs; is that

right?

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- A. IMPLAN has assumptions about every industry that vary by geography in terms of what types of purchases they can make in a local geography.
- Q. So some of the assumptions could be types of goods and services that are required by industries in the electric utility generation sector, for example; is that correct?
 - A. Yes.
- Q. And it makes assumptions about what share of those purchases can be made locally?
 - A. Within whatever the specified local region is that you are looking at.
 - Q. That makes assumptions about household spending patterns and employees based on their income, correct?
 - A. Yes, and based on the economy of that region.
- Q. Are there any other assumptions that you are aware of?
- A. IMPLAN is a very complex model, and so I don't know that I can describe for you every assumption in the IMPLAN model.
- Q. Have you ever looked over the IMPLAN User

3192 Guide? 1 2 Α. Yes. 3 So you are familiar with that? 4 Α. I have looked at the IMPLAN User Guide. 5 I own a copy of it. Okay. That would be a reliable source to 6 7 look at to decipher what type of assumptions are used 8 in the IMPLAN models, correct? 9 Α. Yes. 10 MR. MOORE: Could we approach, your Honor? 11 12 EXAMINER CHILES: You may. 13 MR. MOORE: I just printed out the cover 14 page and the pages I wanted to use, but do I have one 15 full copy of this, if you would like. 16 THE WITNESS: Yes. 17 EXAMINER CHILES: Do you intend to mark 18 this an exhibit? 19 MR. MOORE: Yes, OCC Exhibit 13, I 2.0 believe. 2.1 EXAMINER CHILES: So marked. 22 (EXHIBIT MARKED FOR IDENTIFICATION.) 23 MR. MOORE: Thank you. 24 MR. ALEXANDER: For clarity of the 25 record, the full user guide or the cut-out?

3193 The full user guide. Just 1 MR. MOORE: 2 for the record, this is the IMPLAN Pro User Guide, 3 Analysis Guide, DATA Guide, Version 2.0. 4 MR. ALEXANDER: Counsel, if you are 5 making the entire User Guide, are you going to provide copies at a later time? 6 7 MR. MOORE: I can do that. 8 MR. FISK: I'm sorry, what was that marked as? 9 10 MR. MOORE: I think OCC 13. It's 13. MR. FISK: Okay, thank you. 11 12 Q. (By Mr. Moore) Ms. Murley, if you look at 13 the last page of the abbreviated handout I gave you, 14 it speaks to the key assumptions that an IMPLAN model uses; is that correct? 15 16 I can see that. The heading says "Key 17 Assumptions." 18 Look at the first paragraph underneath 19 the bullet points. It says that "the production 2.0 functions are considered linear." And there is no 2.1 recognition of economies of scale. Do you see that? 22 Yes. Which for a point-in-time analysis, Α. 23 like I did, is a reasonable assumption. 24 Can you explain what that means? Ο. 25 Α. Over time if factor prices change or

production increases or decreases, all factors may not increase exactly proportionally or decrease exactly proportionally, but when we are talking about increase and decrease, we have to also be talking about changes over a period of time. And in my case I was looking at a point in time, so changes that would occur over time with changes in factor prices changes in production amounts didn't affect my analysis.

- Q. How would this affect the electric industry?
- A. For any industry as factor prices change over time, it's possible that they may make substitutions of one input, where sometimes that's possible. Sometimes it's not.
- Q. It you look at the next paragraph, it says, "An industry has unlimited access to raw materials and its output is limited only by the demand for its products." Do you see that?
 - A. Yes.
- Q. So in the electric industry, the raw materials would be coal, gas, nuclear products; is that correct?
- 24 A. Yes.

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Q. And output --

- A. Among other things.
- Q. Right. And output would refer to the production of electricity; is that right?
 - A. Yes.

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- Q. So your model is assuming that access to these materials is unlimited, correct?
- A. Since I am looking at existing plants, clearly they are able to purchase the things they need because they are currently operating that way. This more applies if I were to assume that I was going to triple production, the model assumes that I could get the necessary supplies to triple my production within whatever geographic area I was currently obtaining them, which may or may not be a true assumption, but it doesn't apply to my analysis.
- Q. But a government or a municipality who uses an economic impact study would base decisions on the output of that study, correct?
 - A. I can't really comment on that.
- Q. Okay. And the next paragraph says "that price changes do not cause a firm to buy substitute goods," that the industry demands are assumed to be elastic. Do you see that?
 - A. Yes.
 - Q. So for the electric industry this means

that customers purchase electricity that is assumed to be elastic; is that correct?

- A. I didn't use the model to look at changes in electricity prices.
- Q. But the model can be used to do that, correct?
- A. You would have to make your own assumptions about how spending might change in response to higher electricity prices. The model would not make those assumptions for you.
- Q. And you didn't make those assumptions, correct?
- A. No, I didn't analyze the change in prices.
- Q. And the next paragraph says the proportions of the commodities produced by that industry are assumed to be the same, that is, all products of the industry will be produced at the same rate. Do you see that?
 - A. Yes.
- Q. This is just speaking about products for the electric -- the electric market would be electricity, right?
- 24 A. Yes.

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Q. So it's assuming that electricity is

going to be produced at the same rate in the electric industry; is that correct?

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- A. If we were looking at a production facility that produced more than one product, and let's say, for example, they increased their production, they would maintain the same proportion of product A and product B.
- Q. Okay. How did this affect your economic impact study?
- A. It didn't because we were looking at a point in time, and, in fact, the Sammis plant, for example, only produces one thing.
- Q. And the last paragraph it says that -the second sentence says, "It assumes that an
 industry uses the same technology to produce all its
 products," correct?
- A. If an industry produces multiple products.
 - Q. The industry that you used or that you studied in your economic impact study was based on just one product; is that right?
- A. Yes. So this assumption doesn't really matter for what I did.
- Q. Okay. All right. And moving on, the output impact in an economic impact study is the

total increase in business sales revenue; is that
right?

- A. That's one definition.
- Q. However, local businesses may use some of this new revenue to pay for goods and services outside of the study region; is that right?
 - A. Could you repeat that? I'm sorry.
- Q. I said local businesses may use some of this revenue to pay for goods or services outside of its -- outside of the region that you are studying; is that correct?
- 12 A. Yes, so some of their inputs may come 13 from outside the area.
 - Q. Right. Are you familiar with a value-added impact?
- 16 A. Yes.

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- Q. Did you utilize this impact in your study any?
- A. No. There are value-added multipliers in 20 IMPLAN.
- Q. So the IMPLAN model that you ran did include a value-added impact?
- A. It would be a fourth variable, so I
 looked at output, jobs, and income. I could have
 also looked at value added. Usually the standard

three variables are output, jobs, and income, but it is possible to also look at value added.

- Q. But you didn't include that in the study you presented in this proceeding?
 - A. No, I did not.
- Q. And a value-added impact estimates the increase in the study region's gross regional product; is that right?
 - A. Yes.

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- Q. So, in other words, it estimates the increase in local employee wages plus local business profits, right?
- A. I don't have the definition in front of me, but value-added measures the difference between the raw materials that you start with and the final product, and so you add value through labor and technology.
- Q. Would you agree that this is a more conservative measure of economic activity than an output impact?
- A. I don't have an opinion relative to this particular study. I didn't look at value added for this particular study.
- Q. Have you used value added impacts in the past in previous uses of the IMPLAN model?

- A. Very infrequently. It's not something that I typically include or that's part of the standard what's usually included in the impact analysis.
- Q. So based on that previous use, would you consider it to be a more conservative measure of economic activity?
- A. I don't think I can necessarily offer an opinion on that just in general.
- Q. Are you familiar with the labor income impact?
- 12 A. Yes.

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- Q. You didn't utilize this impact in your economic impact study, did you?
- 15 A. Personal income includes both labor 16 income and proprietor income, so it's part of 17 personal income.
 - Q. So is that a yes, you did include labor income impact in your economic study?
 - A. I didn't break it out explicitly, but, yes, I included it. It is part of personal income.
 - Q. Why didn't you break it out?
- A. I didn't feel it was necessary to separate it.
- Q. Why did you feel it wasn't necessary?

- A. I felt it was sufficient to show personal income, which was a more comprehensive measure.
- Q. But the labor -- the labor income impact represents the increase in total money paid to local employees in the form of salaries and wages; is that right?
 - A. Yes.

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- Q. Would you agree this is an even more conservative approach than the value-added impact?
- A. There's no reason to exclude proprietor income. It may be bigger or smaller in different businesses, but if you have -- not Sammis but their suppliers, they could have owner-operated businesses. Their income would be proprietor income. I don't feel that there is any reason to exclude that versus income of their employees.
- Q. If I could direct your attention to Attachment SM-1 in your direct testimony, page 1 and footnote 1.
 - A. Yes.
- Q. When you referred to information that was provided by FirstEnergy, are you speaking of information that was provided by FirstEnergy Services company?
 - A. I'm referring to the information in

Attachment 1 of that report.

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- Q. Okay. And the second sentence in the same footnote says, "Even if the assumptions outlined in this report were to occur, there will usually be differences between the estimates and the actual results because events and circumstances frequently do not occur as expected"; is that right?
 - A. That's what it says.
- Q. Okay. So you are making this statement based on prior experience and economic impact models; is that right?
- A. This is a standard disclaimer that I put in my reports, but I would be happy to give you examples of circumstances and events that do not always occur as expected.
- Q. Okay. Could you name a few circumstance or events that do not occur as expected?
- A. Let's suppose that Sammis has a supplier that goes out of business for reasons that have nothing to do with Sammis. And so they have to find a replacement supplier who may not be in the same exact location as their original supplier. This would be a difference that we didn't have any way of anticipating. Or suppose an employee household has a divorce and their spending pattern changes. It's not

something we could have anticipated.

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- Q. That's because your economic impact study only shows a snapshot in time, correct, so it can't account for variables such as an employee having to change his spending pattern?
- A. In part, but in part because we are using some standard assumptions about how employees at a certain income level behave, not looking at individual employee households and how they exactly spend. We are using some survey-based assumptions about what the consumer expenditures are made on and how households of different income levels spend their money.
- Q. Right. So you're -- so the assumptions that you are using are as accurate as they possibly could be because you are not going around and asking each employee or each citizen how they spend their money?
- A. They are as accurate as they could be given that we are not going to ask all however many hundred employees exactly how they spend their money.
- Q. That is just a hypothetical assumption then, correct?
 - A. I would say.

MR. ALEXANDER: Objection to the word

"that." I don't think the question is clear as far as what's being referred to.

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EXAMINER CHILES: Can you restate your question, Mr. Moore.

Q. My question was, it's just a hypothetical assumption, correct?

MR. ALEXANDER: Same objection, your Honor.

EXAMINER CHILES: Sustained.

- Q. The inputs that -- the assumptions that are being used by IMPLAN in your economic impact study, are just that; they are just assumptions, correct, they are not facts?
- A. They are assumptions based on actual data for groups of companies in the same industry, data that's collected by the federal government, and IMPLAN customizes that to local areas.
- Q. So the differences between the estimates and the actual results that you stated in footnote 1 that you are referring to, can you quantify a difference by using percentage or range?
 - A. No, I cannot.
- Q. You don't know if there is a 10 percent estimate difference in the estimates and the actual results?

A. I can't quantify that because I'm looking at a whole myriad of suppliers and also their suppliers and where employees shop and also what the suppliers are to the places where they shop, so with that number of assumptions, it would not be possible for me to put a percentage on the value on what the difference is between the actual numbers and what the assumptions might be.

Q. Can you quantify how big an impact this would have on the result of your economic impact study?

MR. ALEXANDER: Objection, asked and answered.

EXAMINER CHILES: Mr. Moore?

MR. MOORE: I asked her earlier if she could quantify a percentage of what the difference would be between estimates and the actual results.

Now I am just asking her how big of an impact will this have on the output numbers that she's presented.

EXAMINER CHILES: Overruled.

MR. ALEXANDER: Could we have the question read, please.

23 EXAMINER CHILES: Could you please reread

24 it.

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25 (Record read.)

A. No, although IMPLAN is a widely used and highly respected model, and I believe the results are reasonably accurate.

- Q. So the answer is you don't know?
- A. I'm not able to quantify that.
- Q. Based on your previous use of the IMPLAN model, what variances have you seen between the estimates and the actual results?
- A. Unless I were to not only obtain data about the exact supplier purchases but also who the suppliers to the suppliers were and how exactly did all of the employees spend their money, not only employees of the company I was looking at but also the employees of the suppliers, I would not be able to make those comparisons. It's not a practical comparison to be able to make for me or anyone else.
- Q. So you don't know, you wouldn't be able to quantify that, correct.
 - A. It's --

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MR. ALEXANDER: Objection, asked and answered.

EXAMINER CHILES: Sustained.

Q. When you conducted your economic impact study, did you look at the data for every region in Ohio?

A. Could you be specific about what you mean by "for every region"?

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- Q. Did you look at data for any other region than the two that you analyzed in your study?
- A. No. I looked at data where the plant was located and for the state.
- Q. Okay. So you don't know of the economic impact of other power plants in Ohio?
- A. I not did look at the impacts of other power plants.
- Q. Is it possible that the economic impact of other plants owned by FirstEnergy companies could be greater than the economic impact of Sammis or Davis-Besse?
 - A. I really can't comment on that.
 - Q. You didn't analyze that, correct?
- A. No, I did not analyze the impacts of other power plants.
 - Q. So is your economic impact analysis that you are presenting strictly based on the two,

 Davis-Besse and Sammis, and everything else staying the same; is that correct?
- A. I'm not making any assumptions about
 other plants. I am simply looking at the operations
 of Davis-Besse and Sammis.

Okay. You spoke earlier about a new Ο. power plant that is being build in Oregon, Ohio; is that correct? Are you aware of that? Α. I am not --MR. ALEXANDER: Objection. Are we asking does she recall the conversation, or does she actually know about the new power plant going forward? EXAMINER CHILES: Could you clarify?

MR. MOORE: I will restate.

- Are you aware of the new power plant Ο. being built in Oregon, Ohio?
- 13 Α. I was not aware of that.
- 14 So that was not included in your economic Q. 15 impact study?
- 16 No, it was not. Α.

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- 17 Are you aware of a new power plant that's Q. 18 being build in Trumbull County, Ohio?
- 19 Α. No, I believe not.
- 20 Q. So that was not included in your economic 2.1 impact study?
 - Α. No, it was not.
- 23 Q. Are you aware of power plants being built 24 in Carroll County and Lucas County, Ohio?
- 25 Α. No, I am not.

- Q. So neither of those power plants were included in your economic impact study either?
- A. No, only the Sammis and Davis-Besse plant were included in my economic impact study.
- Q. But a new power plant would have an economic impact on the geographic location of which it is being built, right?
 - A. Yes, it would.
- Q. Would you agree that would be a positive economic impact?
- A. Yes.

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- Q. And all new power plants will have an economic impact on the state of Ohio as a whole?
- A. All four plants located in the State of Ohio would have impacts on the State of Ohio.
 - Q. I believe you stated earlier your study in your direct testimony was based off data and assumptions from 2013; is that correct?
 - A. Yes.
- Q. And the data and assumptions in your supplemental testimony were based off of the year 2014? Is that right?
 - A. 2015 for my supplemental testimony.
- Q. And your analysis assumes the data is the same for the whole year, correct?

A. We are looking at estimated total payroll paid out over the whole year and estimated employment for the year.

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- Q. Right. So the employee numbers, for example, would stay the same the entire year in your study?
- A. We need to pick a number to do the analysis. It may fluctuate during the year, but I need to identify a particular number to use in my analysis, and this is the number I was provided.
- Q. And if that number did fluctuate, that would impact your study, correct?
- A. If the amount of payroll and employment changed, my results would change, but it's -- it would depend on the proportion on which it changed how much my outputs changed.
- Q. And your study also assumes power plant production was the same for the entire year, right?
- A. It doesn't really matter whether it was the same on every day. It just is assuming a total amount over the period of a year.
- Q. And that amount is just one amount. For your study you are using just one amount, correct?
- A. It's a sum over a period of a year. It doesn't matter if production varies on any different

3211 1 day. 2 But if production changed, that would 3 impact your study, right? 4 Α. If the --5 MR. ALEXANDER: Objection, asked and 6 answered. 7 EXAMINER CHILES: Sustained. 8 So the figures for your study produced Q. 9 shows impacts for just a certain time in the past, 10 right? 11 For a point in time, yes. Α. 12 Q. It does not offer a future projection, 13 correct? That's correct. 14 Α. MR. MOORE: I have no further questions, 15 16 your Honor. Thank you. 17 EXAMINER CHILES: Thank you. 18 Mr. Lindgren. MR. LINDGREN: No questions, your Honor. 19 2.0 EXAMINER CHILES: Did I skip over anyone? 2.1 Let's go off the record briefly. 22 (Discussion off the record.) 23 EXAMINER CHILES: Let's go ahead and go

back on the record just to make it clear we are on

the confidential transcript.

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                  MR. ALEXANDER: Yes, your Honor. We need
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      to clear the room at this point.
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                   I'm sorry, I haven't met you yet, Kim's
      new associate.
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                   (CONFIDENTIAL PORTION EXCERPTED.)
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                   (OPEN RECORD.)
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                  MR. FISK: Thank you, your Honor.
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                  EXAMINER CHILES: I think this is a good
      point for a break. Let's take a 10-minute break and
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      we will return at 10 until 4:00.
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                   (Recess taken.)
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                  EXAMINER CHILES: Let's go ahead and go
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      back on the record.
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                  Before we talk about redirect, there are
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      a few questions from the Bench for this witness.
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                  EXAMINER ADDISON: Ms. Murley, would you
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3215 take a look at your supplemental testimony on page 4. 1 2 I am looking at Figure 1. Just let me know when you 3 are there. 4 THE WITNESS: Yes. 5 EXAMINER ADDISON: For the Sammis region, you had a total output of \$602.17 million; is that 6 7 correct? 8 THE WITNESS: Yes. 9 EXAMINER ADDISION: And for the state of 10 Ohio \$634.06 million? 11 THE WITNESS: Yes. 12 EXAMINER ADDISON: Okay. And then on 13 page 6 of your supplemental testimony --THE WITNESS: Yes. 14 15 EXAMINER ADDISON: -- on Figure 2 the 16 total regional loss you have there is 602.17 million, 17 correct? 18 THE WITNESS: Yes, for total output. EXAMINER ADDISON: And then also for the 19 2.0 total output for total statewide loss, 2.1 \$634.06 million; is that correct? 22 THE WITNESS: Yes. 23 EXAMINER ADDISON: And would you say, if 24 I talked about the relationship between Figure 1 and

Figure 2, would you agree that you could classify it

3216 as complete opposites or an inverse relationship 1 2 depending on whether the Sammis plant retired? Would 3 that make sense to you? 4 THE WITNESS: Yes. 5 EXAMINER ADDISON: Okay. Thank you. And on page 9 of your supplemental testimony, I am 6 7 looking at Figure 3. 8 THE WITNESS: Yes. 9 EXAMINER ADDISON: For total output for 10 Ottawa County you have \$438.51 million; is that 11 correct? 12 THE WITNESS: Yes. 13 EXAMINER ADDISON: And the state of Ohio 14 you have for total output \$487.52 million. 15 THE WITNESS: Yes. 16 EXAMINER ADDISON: And then if you turn 17 the page to page 10 of your supplemental testimony, 18 Figure 4. 19 THE WITNESS: Yes. 2.0 EXAMINER ADDISON: Total for Ottawa 2.1 County loss you have a total output of \$422.01 22 million. 23 THE WITNESS: Yes. 24 EXAMINER ADDISON: And then for total 25 statewide lose you have \$469.17 million; is that

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1	correct?
2	THE WITNESS: Yes.
3	EXAMINER ADDISON: Can you explain why
4	Davis-Besse doesn't show that same inverse
5	relationship that Sammis showed in Figures 1 and 2?
6	THE WITNESS: Yes. So the difference
7	between in absolute value terms the numbers in Figure
8	4 on page 10 and the numbers in Figure 3 on page 9
9	are the long-term decommissioning impacts. So
10	there's a small number of employees, about 21 in my
11	estimate, that remain on the site for a period of up
12	to 60 years, and so there are there's a small
13	amount of impact taking place after year 10. I cover
14	the losses up to year 10 through when the plant is
15	fully decommissioned, which could be approximately 60
16	years in total.
17	EXAMINER ADDISON: Thank you very much
18	for that clarification. No further questions.
19	EXAMINER CHILES: Mr. Alexander,
20	redirect?
21	MR. ALEXANDER: No redirect, your Honor.
22	EXAMINER CHILES: Thank you very much.
23	Ms. Murley, you are excused.
24	THE WITNESS: Thank you.
25	FYAMINER CHILES: Move on to exhibite

3218 1 MR. ALEXANDER: Yes, your Honor. The 2 companies renew their motion for Companies' 3 Exhibits 35 and 36. 4 EXAMINER CHILES: Are there any 5 objections to the admission of companies' Exhibits 35 or 36? 6 7 MR. PETRICOFF: No objections. 8 EXAMINER CHILES: Hearing none, they will be admitted. 9 10 (EXHIBITS ADMITTED INTO EVIDENCE.) 11 EXAMINER CHILES: Ms. Fleisher. 12 MS. FLEISHER: Your Honor, ELPC moves for the admission of ELPC 16. 13 14 EXAMINER CHILES: Are there any objections to the admission of ELPC Exhibit 16? 15 16 MR. ALEXANDER: No, your Honor. 17 EXAMINER CHILES: Hearing none, ELPC 16 will be admitted into evidence. 18 19 (EXHIBIT ADMITTED INTO EVIDENCE.) 2.0 EXAMINER CHILES: Ms. Bojko. 2.1 MS. BOJKO: Thank you, your Honor. At 22 this time I move the admission of OMAEG Exhibit 12. 23 EXAMINER CHILES: Are there any 24 objections to the OMAEG Exhibit 12? 25 MR. ALEXANDER: No, your Honor.

3219 EXAMINER CHILES: ELPC Exhibit 12 will be 1 2 admitted into evidence. 3 (EXHIBIT ADMITTED INTO EVIDENCE.) 4 EXAMINER CHILES: Mr. Moore. MR. MOORE: We would like to move for the 5 admission of Exhibit 13, but we would like to move 6 7 the abbreviated version in, not the entire version. 8 EXAMINER CHILES: Are there any objections to the admission of the abbreviated 9 version of OCC Exhibit 13? 10 MR. ALEXANDER: No, your Honor. 11 12 EXAMINER CHILES: Hearing none, it will 13 be admitted. (EXHIBIT ADMITTED INTO EVIDENCE.) 14 15 EXAMINER CHILES: And, Mr. Fisk. 16 MR. FISK: Your Honor, we would like to 17 move into the evidence Sierra Club 56 Confidential. 18 EXAMINER CHILES: Any objection to the admission of Sierra Club 56 Confidential? 19 2.0 MR. ALEXANDER: No. Thank you, your 2.1 Honor. 22 EXAMINER CHILES: Hearing none, it will be admitted. 23 24 (EXHIBIT ADMITTED INTO EVIDENCE.) 25 EXAMINER CHILES: Thank you.

3220 Let's go off the record for a minute. 1 2 (Discussion off the record.) 3 EXAMINER PRICE: Let's go back on the 4 record. 5 Mr. Lang, call your next witness. MR. LANG: Thank you, your Honor. 6 7 companies call Rodney L. Phillips. 8 (Witness sworn.) 9 EXAMINER PRICE: Please be seated and 10 state your name and business address for the record. 11 THE WITNESS: My name is Rodney L 12 Phillips. My business address is 76 South Main, 13 Akron, Ohio. 14 EXAMINER PRICE: Please proceed. 15 MR. LANG: Your Honors, we have premarked 16 the direct testimony of Gavin Cunningham, both public 17 and confidential versions, and Mr. Phillips' 18 supplemental testimony, so we will have him describe which one is which. 19 2.0 (EXHIBIT MARKED FOR IDENTIFICATION.) 2.1 22 RODNEY L. PHILLIPS 23 being by me first duly sworn, as hereinafter 24 certified, deposes and says as follows: 25

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1	DIRECT EXAMINATION
2	By Mr. Lang:
3	Q. Mr. Phillips, do you have Company Exhibit
4	37 in front of you?
5	A. Yes. That's the Direct Testimony of
6	Gavin Cunningham on August 4, Public Version, 2014.
7	Q. And then do you have Exhibit 38C, for
8	Confidential?
9	A. Yes. That's the Direct Testimony of
10	Gavin Cunningham on August 4, 2014.
11	Q. The Confidential Version, correct?
12	A. Confidential Version, correct.
13	Q. And then Company Exhibit 39, do you have
14	that?
15	A. Yes. That's the Supplemental Testimony
16	of Rodney L. Phillips on May 4, 2015.
17	MR. LANG: And, your Honors, may we
18	approach?
19	EXAMINER PRICE: You may.
20	Q. Mr. Phillips, in relation to your
21	supplemental testimony that you filed, did you also
22	prepare workpapers?

A. Yes.

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Q. And were there portions of the workpapers that were confidential and portions that were not

confidential?

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- A. Yes.
- Q. All right. Is what's been marked as Company Exhibit 40, the public or nonconfidential portions of your workpapers?
 - A. Yes.
- Q. And then what's been marked as Company Exhibit 41C, for Confidential, is that the two pages of your workpapers that are confidential?
 - A. Yes.

MR. LANG: Just for the other parties that have the workpapers as they were distributed earlier, the first two pages are the cost calculations, that's what's been marked as Company Exhibit 41C, as Confidential. The rest was marked separately as Exhibit 40.

- Q. Thank you, Mr. Phillips. Do you have any corrections to make to your supplemental testimony?
 - A. No.
- Q. Did you as part of your supplemental testimony make corrections to Mr. Cunningham's direct testimony from August 4?
- 23 A. Yes.
- Q. And that is identified in your supplemental testimony; is that correct?

A. Yes.

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Q. If I were to ask you the questions in your supplemental testimony and the questions in the testimony you adopted of Mr. Cunningham, as you modified in your supplemental testimony, would your answers be the same today?

A. Yes.

MR. LANG: Your Honors, with that, Mr. Phillips is available.

EXAMINER PRICE: Thank you.

Ms. Petrucci.

MS. PETRUCCI: Thank you very much.

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14 CROSS-EXAMINATION

15 By Ms. Petrucci:

Q. Let me see if I can scoot over and make it easier for both of us. Let's start with the estimate of transmission upgrade costs that were contained in the August, 2014, testimony of Mr. Cunningham. He relied upon three inputs which he identified on page 4. Can you tell me with respect to the first two what timeframe those models were created?

A. The PJM RTEP 2019 base case model and the 2017 base case model for reliable RPM, those would

have been in mid-2014.

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- Q. And you relied upon those when you created and prepared your testimony in May of 2015 or you accepted them; is that correct?
 - A. Yes.
- Q. Both of the cost estimates, the one that was contained in the August, 2014, testimony and then the May, 2015, updated testimony assumed the full closure of Davis-Besse and the Sammis plants; isn't that correct?
- A. Yes.
- Q. Were you instructed to assume the plant -- that the plants would close in full?
- A. I was instructed to study the retirement of Sammis and Davis-Besse fully.
 - Q. Both of the cost estimates assumed the full closure of both Davis-Besse and the Sammis plants at the same time; isn't that correct?
 - A. Yes.
 - Q. And were you also instructed to assume that both the Davis-Besse plants and the Sammis plants were going to close fully at the same time?
 - A. Yes.
- Q. And how many units are at the Sammis plant?

- A. At Sammis there are seven units.
- Q. And some of those are baseload units and some of them are not, correct?
- A. I'm not sure what -- if you define by baseload, I think of baseload as you will see them run around the clock to serve the native load. By that definition they all do that. Now, that's how I think of baseload.
- Q. Okay. And I was relying upon
 Mr. Harden's testimony that he presented earlier in
 this case where he described two of the units, 6 and
 7, of the Sammis plant as baseload units. Did you
 happen to see his testimony in this case?
 - A. No.

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- Q. Okay. He described the other units as load-following units at Sammis. Are you familiar with that at all?
- MR. LANG: Objection, your Honor. He says he hasn't seen Mr. Harden's testimony. Perhaps if we can get back to Mr. Phillips' knowledge instead of what has been testified to by Mr. Harden.
- EXAMINER PRICE: He can answer if he knows.
- Can we have the question again.

 (Record read.)

- A. I'm not sure what you meant by "load following." I only think of peakers or baseload units.
- Q. Okay. And for purposes of creating the cost estimates for the transmission upgrades, what date was assumed for the closure of the Davis-Besse and the Sammis plants?
 - A. June, 2017.

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- Q. In your testimony you indicated that the location of generating plants being removed from service is important for determining estimates for transmission upgrade costs. Did your analysis incorporate any assumptions or otherwise take into consideration new generation coming on line in Ohio while you assumed that both the Davis-Besse and the Sammis plants would be closed?
- A. We used the PJM 2019 RTEP case and the 2017-18 RPM case, which were provided by PJM, and PJM then will include generation for those years that would be in service based on where they fall in the generation queue. If they would have had signed a facility study agreement or an interconnection service agreement, then they would have been included in the study if they would have been in service for the year that was being studied.

- Q. So for purposes of Ohio, do you know what was included in those PJM models as new generation?
- A. I do not know everyone. I do recall in the model for the 2019 RPM Oregon Clean center was in the model. It was not in the 2017 model. And I don't recall others off the top of my head.
- Q. Now, with respect to the Oregon Clean Energy Facility, when you indicated it was included in the 2019 model but not in the 2017 model, what impact would it be having only partially been included in the inputs that you used?
- A. Well, if it's not in the model, then it's not part of the transmission system topology that you are studying.
- Q. Just to make sure I understand, so the additional generation that is anticipated to come on line from the Oregon Clean Energy Facility would not be recognized for purposes of your analysis of any transmission upgrades that would be required if both Davis-Besse and the Sammis plants all closed at one time?
- EXAMINER PRICE: Can I have the question back again, please?
- 24 (Record read.)

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25 A. So the plant -- Oregon plant was included

in the base case received from PJM for the 2019 RTEP. For the study case used for 2017 RPM case, it was not in that model.

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- Q. So then I wanted to go back to my other question. By having that Oregon plant included partly in the inputs that you used, what impact does that have on your transmission upgrade calculations?
- A. The 2019 RTEP case is used to do generation deliverability studies and N-1-1 studies. So for those studies that you were studying that PJM does, it would have been included and be part of the topology.

For the 2017 RTEP, which is used to do a study called load deliverability, in that case it would not have been reflected, which means it would not have been -- any impact it would have of being in -- being in the model as far as topology would not be looked at.

- Q. Is it fair to say the full impact of the Oregon Clean Energy plant is not recognized within your analysis because it was not included in the 20th 17 PJM model?
- A. When you look at the load deliverability study, the impact of that would not have been in those results that was studied.

Q. Is the answer then yes to my question?

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- A. For the load deliverability study, it did not produce any transmission overloads so it really had no impact on our study when you look at the total study results we had, and we identified the overloaded lines. The load deliverability study, I did not produce any overloads from that. That study did not result in any overloads.
- Q. And am I correct that you don't recall whether or not the PJM 2019 model and the 2017 model included the Carroll County Energy facility, which is planned for operation in Ohio; is that correct?
- A. No. For Carroll County, I do recall it was not in the 2019 model. It was not in the 2017-18 model. PJM did not include it because it did not meet their requirements for in-service date or far enough along in the queue process where you sign a facility study agreement or interconnection study agreement.
- Q. And at this point in time are you aware whether or not the Carroll County Energy facility is under construction?
- A. I do not know if it's under construction or not.
 - Q. Do you recall how big that generating

station is expected to be?

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- A. I believe it is around 670 megawatts.
- Q. And do you recall where it is going to be located?
- A. I know it's going to connect in AEP's territory off of, I think, it's their TIDD to Canton central line.
- Q. Maybe we can point to at least a part of the state of Ohio. Do you agree with me it's planned to be in Carroll County, Ohio, on the central eastern side of Ohio?
- A. Yeah. It's in Carroll County. I believe it's somewhere near Canton. I don't know the exact distance.
- Q. And that's the same region of the state of Ohio that the Sammis plant is located in general?
- A. Yeah. The Sammis plant would be east of where that proposed line is where the generator would be.
- Q. And then with regard to the Oregon Clean Energy plant that you stated was included in part of the models that were input into your analysis, that facility, do you recall the size of it?
 - A. Yes, I believe it was like 799 megawatts.
 - Q. And do you recall where that's going to

be located? Or where it -- do you recall if it's
under construction at this point?

- A. That one I do believe is under construction. That generator is being constructed off of the transmission line -- actually two transmission lines that serve out of our Bay Shore substation. That goes to Fostoria and Monroe.
- Q. Okay. So that's in the northwest section of Ohio, correct?
 - A. Yes. That would be near the Toledo area.
- Q. Okay. So it's close to -- would you agree with me close to a load center in Ohio, being near the city of Toledo?
- A. Yes. That's a big -- that's one of the big towns near there, yes.
- Q. And would you agree with me also that that is also a region of the state near where the Davis-Besse plant is located?
- A. Davis-Besse is probably 20 or 30 miles to the east, yes.
- Q. Are you aware also that the -- there is another plant in Ohio that is planned in Lordstown,
- 24 A. Yes.

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Q. And are you aware that the Ohio Power

Siting Board recently granted it a certificate?

A. No.

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- Q. Do you recall the size of that plant?
- A. 800 megawatts, I believe.
- Q. And do you recall the location that it's planned for?
- A. Yes. That is going to be connected off of two lines, one Sammis to Highland, one line

 Mansfield to Highland, which is near the Youngstown area. It's somewhere in that general area.
- Q. Okay. Thank you. That was the same spot on the state I was going to point you to as well. So all together with those three plants, the one under construction, being Oregon Clean Energy; the Carroll County Energy plant; and then the Lordstown plant, which just was recently certificated, roughly how many megawatts are anticipated from those three plants based on what you told me earlier? Do you know?

MR. LANG: Objection, your Honor.

EXAMINER PRICE: Grounds?

MR. LANG: She's asking megawatts anticipated. It's ambiguous as to what she means by that, whether she is asking him to assume that they are all going to be constructed or not, which is just

unclear.

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EXAMINER PRICE: Can you rephrase, please?

- Q. (By Ms. Petrucci) Based on what you described as the megawatts for each of those three plants, can you tell me how much the total would be if they are constructed as you envisioned or identified?
- A. Those -- I know these three plants are in the generation queue. Those three generation plants added up, off the top of my head, to somewhere around 2,200 megawatts. Concerning do I anticipate them to be in service, they are in the generation queue process and --
- Q. I'm sorry to interrupt, but that was all I asked, what the total number was.
- MR. LANG: Your Honor, if he could finish his answer. She did ask what he was envisioning.
- MS. PETRUCCI: No, I asked him to tell me the total amount of megawatts.

EXAMINER PRICE: Okay. First, always address your comments to the Bench, not to each other. Second of all, why don't you finish your answer, and then if you have a motion to strike, we will entertain that.

MS. PETRUCCI: All right.

EXAMINER PRICE: Go ahead and finish your

answer.

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THE WITNESS: Okay. Concerning anticipating, those are in the queue process, and PJM has a process of steps to go through for that, whether generators are in a -- start out with a feasibility study, an impact study, a facilities study, and then they have a -- and then they sign agreements.

And as far as anticipating if they would be in service, when you look, PJM puts statistics together as far as the likelihood of generators going in service, and when you look at those statistics when generators first start to process, only 14 percent of them — if you look in terms of the number of megawatts, 7 percent of them go into service. And as you go through the process, they continue to drop out.

In fact, when they signed the facility study agreement, there are 70 percent of them that drop out, and then even after they sign their interconnection agreements, it's close to 50 percent of them drop out, so I don't -- can't anticipate if they are going to be in. If you look at the odds of

the PJM, the odds are not high that generators go in service that are in the queue.

MS. PETRUCCI: And, your Honor I would like to move to strike. My question was the total amount of megawatts that were anticipated from those three plants as they have been designed. I was not asking for his opinion as to whether he believes they are going to be, in fact, constructed and operating.

EXAMINER PRICE: Let's have

10 Ms. Petrucci's question back again, please.

(Record read.)

EXAMINER PRICE: I certainly think there is some ambiguity "as you envisioned or identified," so the motion to strike will be denied.

Mr. Phillips, are you aware whether any of those plants have cleared the base residual auction for 2018-19?

THE WITNESS: No, sir.

19 EXAMINER PRICE: You are not aware or you

20 know they have not?

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21 THE WITNESS: I do not know anything 22 about them concerning the capacity auctions.

EXAMINER PRICE: Okay. Thank you.

Ms. Petrucci.

MS. PETRUCCI: Okay.

Q. (By Ms. Petrucci) Now, you indicated those three plants would bring approximately 2,200 megawatts, and in comparison, can you tell me how many megawatts the Davis-Besse plant provides?

- A. The Davis-Besse is a little over 900 megawatts.
 - Q. And the Sammis plant?

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- A. Totals around 2,200 megawatts.
- Q. And that 2,200, is that assuming all seven units are running?
- A. Yes, that would be the total for all seven units.
- Q. Going back again to the inputs, the PJM models that were used for purposes of estimating the transmission upgrade costs, do those include any assumptions for already planned transmission upgrades?
- A. Yes. When you look at the 2019 RTEP, it would have included in it any transmission facility changes that would be in place of June, 2019, and the 2017-18 RPM case would have any facilities that were going to be in service for 20 -- June, 2017.
- EXAMINER PRICE: Can I have the answer back, please?
- 25 (Record read.)

EXAMINER PRICE: Why did you use the June 2017-18 RPM study. Was the later one not available?

THE WITNESS: Yeah, the 2017 RPM case, that was the latest case available for PJM. When you do the load deliverability study, you use -- that's the case you use for that, and that was the latest available.

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EXAMINER PRICE: Thank you.

- Q. (By Ms. Petrucci) By assuming the full closure of both the Davis-Besse plants and the Sammis plants at the same time, are more transmission upgrades going to become necessary at one time?
- A. The study that we did covered both plants retiring at the same time, so we studied the impacts of them retiring at the same time, so the upgrades that we would have identified would be upgrades that would need to be addressed at the same time.
- Q. Now, you also refer in your testimony to transmission upgrades that have been required due to retirements between 2012 and 2015. And on page 10 of your supplemental testimony, you refer to an allocation with respect to those costs. Who decided the allocation of those costs?
- A. The allocation for the upgrades from those plants, PJM would do that. They are the one

who determined the cost allocation.

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- Q. And are you presenting an allocation at all in this case?
- A. What I covered in my testimony was that we identified upgrades, and the final solution that will be done will be some combination, I believe, of reconductoring of facilities, rebuilding of facilities, and new facilities. So I do not know exactly what the new facilities will be, plus that is a cost allocation that needs to be done by PJM. They are the ones that run that and have the methodology to do that.

So what I presented was in lieu of not having the actual costs, not able to determine the actual costs, that we were looking at plants retiring in ATSI, and I had recent history examples of plants that were retiring in ATSI that were serving load in ATSI very similar to the plants of Sammis and Davis-Besse. And what we saw from the history of those retirements were that when those plants retired and additional generation would have to be brought in to serve that load, that the allocation for those type upgrades was 82 percent for that.

Q. Okay. So is it fair to say that the 82 percent that you have included in your testimony

is the allocation that was decided by PJM for those prior 38 transmission upgrades?

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- A. Yes. The 82 percent I referenced was the 82 percent that PJM came up with for the retirement of the Lake plants in between 2012 and 2015.
- Q. Okay. And then if the Davis-Besse plant and the Sammis plants were to close and transmission upgrades were needed, then at some point in time PJM is going to decide the allocation of costs associated with those transmission upgrades, correct?
- A. If those plants retired, PJM would determine what type of upgrades were needed, and then they would also, after that was determined, they would do a cost allocation.

EXAMINER PRICE: Before we leave this topic near and dear to my heart, your organization was responsible for performing the transmission upgrades; is that right? Your area within the FirstEnergy companies was responsible for that; is that correct?

THE WITNESS: When you say my area -- EXAMINER PRICE: Where you worked at the time, where you work now.

THE WITNESS: No, that was not -- no, now I am currently in transmission operations.

EXAMINER PRICE: Okay. So you were not responsible, okay. Well, maybe you know the answer to this, maybe you don't. Do you know how many jobs were created for the million dollars in transmission upgrades that were made necessary by the 2000 -- by the recent retirements?

THE WITNESS: No.

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EXAMINER PRICE: Fair enough. Thank you.

- Q. (By Ms. Petrucci) Just to follow-up on your last answer to the question I last asked, as a result, at this time PJM has not conducted any allocation of costs for transmission upgrades associated with the closure of Davis-Besse or the Sammis plants, correct?
 - A. No, PJM has done no allocation.
- Q. And there would be no transmission upgrade costs if Davis-Besse and the Sammis plants are not closed -- well, let me state that again. There would be none of the identified transmission upgrade costs incurred if the Davis-Besse and the Sammis plants are not closed, correct?
- A. If Davis-Besse and Sammis did not retire, the upgrades that were identified in our study would not be done.
 - Q. And you are not here to present an

opinion as to whether or not Davis-Besse is at risk of closure or retirement, correct?

A. Correct.

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- Q. And you are also not here to present an opinion as to whether the Sammis plants are at risk of closure or retirement, correct?
 - A. Correct.

MS. PETRUCCI: Just one moment. I want to make sure I have covered everything, your Honor.

- Q. Is it possible that the transmission upgrades, the 38 transmission upgrades that you referenced in your testimony, could be the result of retirements of other plants than what has been identified?
 - A. What study are you referring to?
- Q. The 38 transmission upgrades that you have contained in the direct testimony -- I am trying to find it. Page 3, line 13, is it possible some of those upgrades could be the result of other retirements, other than those set forth between 2012 and 2015?
- A. Those upgrades, the 38 that were identified, we know that the plants had a big impact on driving those, and PJM in their May 12 TEAC report, they went over all -- all the facilities that

had retired at that time, so not only did you have those, you had a whole portfolio of facilities -- or generators that were retiring. And PJM outlined in their TEAC report they went over about and talked about the Lake plants and their impact and how those caused voltage and thermal, and they went through that section and explained the Lake plants did that.

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They did mention one spot in there, but the New Castle project, that also maybe primarily affected that upgrade, which was one of the upgrades, but so did the Lake plant retirements, so there -- those were all studied in a portfolio. So projects came in. PJM studied some, and then others continued to come in. So at the end of the day when they did their presentation, they did an overall presentation.

So I know at least one of those PJM pointed to New Castle also impacted generation.

There could be others. I know the TEAC report, they definitely did point to New Castle, also impacted on one facility.

Q. So you couldn't say. Just to make sure we're clear, at least in part some of the 38 transmission upgrades that had been required were due to retirements or other plants other than what had been identified -- identified as the Ohio plants?

1 MR. LANG: Objection, your Honor. Asked 2 and answered. 3

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EXAMINER PRICE: Overruled.

The 38 projects were impacted by the retirement of the Lake plants, and at least one other of those, also New Castle would have impacted those upgrades needing done.

MS. PETRUCCI: I have no further questions. Thank you very much, Mr. Phillips.

EXAMINER PRICE: I guess I am confused by your state of knowledge about those 2012-2015 projects. Let's look at your testimony, your supplemental testimony on page 9, line 21.

How familiar are you with the transmission projects that you describe on lines 21 through 24 and on to the next page on line 1?

THE WITNESS: I have reviewed those projects with Mr. Cunningham and our transmission planning group, who would have been involved when those plants retired.

EXAMINER PRICE: And did you review the cost estimates with Mr. Cunningham?

THE WITNESS: I reviewed his cost estimates that he had done, yes.

25 EXAMINER PRICE: And did you review the

scope of work of what needed to be done? 1 2 THE WITNESS: When you refer to the scope 3 of the work for the upgrades that needed to be done? EXAMINER PRICE: Well, you discuss new 4 5 lines, new transformers, new substations. You reviewed all that information? 6 7 THE WITNESS: Yes. I discussed it, what 8 my testimony was going to be. 9 EXAMINER PRICE: And yet you can't answer my question about how many jobs were created by those 10 11 investments. 12 THE WITNESS: We discussed the impacts on 13 the transmission system, the lines, but we had no 14 discussions -- I saw nothing -- we discussed nothing 15 on number of jobs being created. 16 EXAMINER PRICE: Fair enough. 17 Mr. Moore? 18 MR. MOORE: Yes. 19 2.0 CROSS-EXAMINATION 2.1 By Mr. Moore: 22 Good afternoon, Mr. Phillips. Q. Good afternoon. 23 Α. 24 My name is Kevin Moore on behalf of Ohio 25 Consumers' Counsel.

So as you said earlier, the 2019 RTEP base case model was used to perform the generation deliverability analysis; is that right?

A. Yes.

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Q. Who performed the generation deliverability analysis -- excuse me. Who performed like the load flow modeling associated with the generation deliverability analysis?

EXAMINER PRICE: Mr. Moore, I am going to try to ask you to project a little more because I know the people over there, and my experience when I was sitting off to the side, is it's very difficult to hear you.

- Q. Did you hear me, Mr. Phillips?
- A. Yes. So Gavin had a team of people that worked on doing the overall analysis, so Gavin and his team decided what type of studies needed to be done.
- Q. So did Mr. Cunningham perform the generation deliverability analysis?
- A. Well, there's several steps to that, so Gavin and his team would have decided what studies needed to be done. Gavin and the team together decided if you're going to do those studies, what models you would use, and they got the models off of

PJM because those would provide the right information because PJM has a strict process they go through to get that information put together.

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After you get the model, the next thing you do -- and that's the key part so you have this transmission system modeled correctly. So after you get the model, the next step then is you do use software that uses that information of the model to perform a load flow study.

So one of the members on Gavin's team was Scott Gass. Scott works for PowerGem. Scott is a former employee. He used to work for PJM and he did those transmission studies. That's what he was an expert on at PJM and did that for a number of years. And, as I said, the team did these things together, but Scott was the one member on the team who ran -- ran the software, and then after the software ran and the results came out, then Gavin and the team reviewed the results.

- Q. Did you personally conduct any of the modeling associated with the generation deliverability analysis?
- A. The studies were already done, and I just reviewed the process, the methodology, what they used, what the results were, those type of things.

3247 1 Q. So the answer to my question is no, 2 correct? 3 MR. LANG: Objection, your Honor. 4 EXAMINER PRICE: Grounds? 5 MR. LANG: He answered the question. Ιt wasn't a "yes" or "no" answer. It was that answer. 6 7 EXAMINER PRICE: I understand, but he was 8 simply trying to narrow down, have a nice clean 9 record. 10 Fair enough. You can answer the 11 question. 12 Α. I ran no additional studies. They had 13 already completed that. 14 And PJM did not perform any of the modeling for the generation deliverability analysis, 15 16 correct? 17 I'm a little confused what you are 18 calling modeling. PJM provided the models, but they 19 did not perform any load flow studies on them. 2.0 Q. Okay. And you did not ask PJM to 2.1 personally perform any load flow studies on the 22 models they provided you, correct? 23 Α. No. 24 EXAMINER PRICE: Have you consulted with 25 PJM regarding the types of upgrades that may be

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1	necessary?
2	THE WITNESS: No.
3	EXAMINER PRICE: Has anybody at
4	FirstEnergy or FirstEnergy Solutions or FirstEnergy
5	Corp. consulted with PJM regarding the upgrades that
6	may be necessary?
7	THE WITNESS: I am not aware of any
8	discussions with PJM.
9	EXAMINER PRICE: If discussions had been
10	had, would you be aware of them?
11	THE WITNESS: If Gavin, who ran the
12	study, would have, I am sure that's one of the things
13	that would have been discussed with me.
14	EXAMINER PRICE: Okay. Thank you.
15	Q. (By Mr. Moore) Did Mr. Gass also perform
16	the modeling associated with the load deliverability
17	analysis?
18	A. Mr. Gass would have performed the same
19	role where he ran the software, yes.
20	Q. So you did not personally conduct this
21	modeling either, correct?
22	A. Those studies were already done, and I
23	did not run any additional studies.
24	Q. And PJM did not conduct any of the

modeling for that, correct?

- A. They provided the RPM case that was used, but they did not run the study.
- Q. And you did not ask PJM to perform any of the modeling in the meantime?
 - A. I did not, no.
- Q. Do you know if PJM performed such modeling?
- A. Yes. PJM, when generators actually put in a notice that they are going to retire, that's the studies that PJM will do, yes.
- Q. Let's talk a little bit about what PJM does do when a generator notifies them they would like to retire. Are you familiar with that process at all, Mr. Phillips?
- A. Some.

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- Q. So PJM generation owners are required to notify PJM of their intent to deactivate or retire, correct?
 - A. Yes.
 - Q. And this notice period is at least 90 days prior to the deactivation; is that right?
 - A. I believe that's the timeframe.
- Q. And then, as you said, PJM will -- will conduct a series of studies and analyses on how such a generator deactivation will impact the transmission

system; is that right?

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- A. Yes.
- Q. And those impacts will include reliability impacts; is that right?
- A. They will be studying what type of reliability criteria violations would occur on the transmission system.
 - Q. What type of studies do they do?
- A. They do similar studies to what we did, gen deliverability, load deliverability N-1-1.
- Q. So if PJM determines there is no reliability issue with the plant's retirement, then they will notify the generation owner that they can retire; is that right?
- A. They will notify -- yes, they have to tell the owner if there is any retirement -- or any issues, but all they do is tell that to them, and they can still retire even if they wanted to.
- Q. But if PJM identifies reliability or market power issues, it will order certain transmission upgrades or additions to be built by transmission owners, correct?
- A. Yes. If there were reliability criteria violations, then PJM would identify required upgrades which would be done by the transmission owners.

Q. And if PJM determines that a plant needs to run beyond the proposed retirement date to assure reliability while these transmission upgrades are completed, then the generator can be compensated to keep the plants open until those upgrades are completed; is that right?

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- A. PJM has a process that they call reliability must-run. If they had issues that could not be solved before the generator retired, they could request the generator to fall under this reliability must-run for them to stay on, but that's not a requirement for generation under. They would have to make that decision.
- Q. Do you know if PJM has performed a similar study or analysis on the PPA units' retirement?

MR. LANG: Objection, your Honor. Just point of clarification, the PPA units?

MR. MOORE: I'm sorry, I should have specified that earlier. I will rephrase.

- Q. Do you know if PJM has performed a similar study or analysis on the Sammis and Davis-Besse power plant retirements?
- A. There's not been a formal request, so nothing -- they wouldn't have done it through a

retirement. I don't know if there is other scenarios what else PJM might do.

Q. So, to your knowledge, they haven't performed --

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- A. To my knowledge, they have not.
- Q. You did not ask PJM to perform an analysis?
- A. No. PJM leaves it up to the transmission owners to run their own different scenarios. They are quite busy just addressing generator deactivations or their normal studies they are doing, so they normally would not want to help -- not say help, but they are busy. We don't request them to run just scenarios for us.

We had the models that are available to us, and we have the capability of running those, and we do that every year, hundreds of times with all those studies, so that's not something we would ask PJM to do normally.

- Q. If PJM did run such an analysis, could it come to a different conclusion than you did?
- A. If PJM ran the same analysis using the same 2019 RTEP and 2017-18 reliability, I would expect them to come to similar results.
 - Q. So the analysis is not subject to

different interpretation?

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- A. No. The key is getting the model established right, and that's why we use that from PJM.
- Q. But you will agree that PJM's responsibility is to ensure the reliability of electric transmission systems; is that correct?
- A. PJM is -- PJM is one of several entities that have responsibility for reliability of the system. The transmission owners have responsibility for building new facilities when directed by PJM or doing maintenance or similar. My job is managing the control centers that manage this system.

NERC has responsibility for the reliability of the system or the ones who establish the standards that we have to follow PJM and the transmission owners, and even states have responsibilities. Some of the different commissions in the states are responsible when we are trying to build transmission for siting, so they are involved. Also states have requirements and look at the maintenance that's performed on the transmission system, aerial patrols, wood pole inspections, different things vary.

responsible for running the different studies, but other entities also have responsibility.

- Q. And the entities you just mentioned, PJM, NERC, state commissions, and states themselves, would they continue to be responsible for the reliability of the electric transmission system whether the plants, Sammis and Davis-Besse, are retired or not?
 - A. Yes.

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- Q. The study you are presenting in your testimony, it assumes Davis and Sammis are retiring at the same time; is that correct?
 - A. Yes.
- Q. As part of that study, you did a contingency analysis; is that right?
- A. When you perform the different studies, so in the 2019 RTEP, you do an N-1-1 contingency analysis. When you do the gen deliverability analysis, that's a special type of stress case, and in that case you also do contingency analysis. And when you do the load deliverability, which is another different type of stress case, you also do contingency analysis in it.
- Q. But you did not do a full contingency analysis; isn't that right?
 - A. For the N-1-1 we did contingency analysis

on 230 kV and above. In Ohio when you do the N-1-1 -- when you run the different contingencies, they are across PJM, and you're looking at close to nine or ten thousand different contingencies you're trying to study, so you're running one thing happens, what does the system look like; another thing happens, what does the system look like?

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When you do the N-1-1, you take one contingency and then you take -- and you also look at all the rest of them happening by the time that you pair them up. So when you run the N-1-1, you are in the tens of millions of analyses that you are doing.

So when we did the N-1-1, we just looked at the contingencies that were with Ohio, so in that case we did not look at any contingency for the N-1-1 that would have been outside the Ohio footprint. So that would have been something we did not look at so there could have been something we missed in that case.

- Q. So there could be transmission upgrades that are necessary outside of Ohio that you didn't study as part of your transmission upgrade study?
- A. On the N-1-1, there could have been other contingencies outside of the Ohio area that could be impacted that when Sammis and Davis-Besse were moved,

and there could have been ran so many of these other contingencies, they could have identified overloads also.

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Now, the overloads could have ended up being anywhere on the system. It would have been just those combinations of overloads that would have caused somewhere on the system to be an overload. It could have even been an overload that occurred in Ohio or wherever. It was just the contingencies in N-1-1 outside that we did not study.

- Q. But those contingencies could be or would be in the PJM system, correct?
- A. Yes. The studies, the N-1-1, we did not study were the PJM -- outside the Ohio area of PJM.
- Q. As part of your study you also did a voltage analysis; is that correct?
- A. As part of the study that we did, we just looked to see in -- that would have mainly been with the N-1-1, or with the load deliverability we looked at if there was major voltage problems, like voltage collapse, something like that. We did not study the individual just small voltage changes. It was just some major voltage issue.
- Q. So your analysis was a limited voltage analysis, correct, in that it wasn't a full voltage

analysis?

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- A. It was not a full voltage analysis because we just looked for, like, a voltage collapse.
- Q. I think you spoke a little bit earlier with Ms. Petrucci about the 2019 RTEP base case model and when that was done. You said it was mid-2014; is that right?
- A. Yeah. PJM -- PJM will start working on those base cases during the first half of the year. They are working on finalizing that, and they are usually finalized where they start doing their studies after mid-year.
- Q. Do you know which years' load forecast was used for the RTEP base case model? Would that be 2019?
- A. For the load forecast -- or for the RTEP model that we used, the 2019 RTEP model, PJM would have had a load forecast for 2019 based on their latest study they had done, which would have been at the beginning of 2014 where they forecast out for a number of years.
- Q. So if a generation facility that signed a facility agreement was scheduled by PJM to be in service after mid-2019, it was not included in the 2019 RTEP base case; is that correct?

A. For sure any generator who was not in service by June 1st of 2019 would not be included, so any generator that was a new generator that was coming on line after June 1, 2019, would not be included.

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- Q. Now, you said 2017-2018 RPM base case model was developed in mid-2014, right?
- A. It would be a similar process in the first half of 2014, and it would have been finalized May, June, something like that.
- Q. So the load deliverability analysis which was taken from the RPM 2017-2018 base case model does not include any changes to the PJM generation queue that occurred since mid-2014; is that right?
- A. So it would have looked at -- the way that would work is PJM would have looked at for both -- both models, 2017 and 2019, they would have looked at generators who had signed a facilities study agreement or interconnection service agreement. And then for the 2017 RTEP -- or RPM case, if they had signed those two agreements and were going to be in service by June 1, 2017, they would include that.

So if somebody had changed or some other change happened after mid-2014, that case would already have been locked down and finalized and those

changes would not be in the case.

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- Q. And, likewise, the load deliverability analysis would not include any changes to the regional transmission expansion planning process that happens in 2014, right?
- A. For the RTEP, if the RTEP had -- for the RTEP in the RPM case for 2019, they would -- by mid-year of 2014, they would have identified and included in the case any facilities that were scheduled to be in service by June 1, 2019, or in the RPM case June 1, 2017. So by mid-year PJM would have identified that, and that would have been finalized so if any additional facilities were identified after that, those would not be included.
 - Q. After mid-2014, right?
- A. After mid-2014, PJM, that would fall for another year.
- Q. Okay. And also the load deliverability analysis would not reflect any changes to the PJM load forecast that would have occurred since mid-2014, correct?
 - A. That's correct.
- Q. You talked a little bit earlier about some of the new plants that are coming on line. For example, you talked about you are aware of the new

power plant being built in Lordstown, Ohio, right?

- A. I'm aware of the Lordstown plant that's in the generation queue, yes.
- Q. And the 2019 RTEP base case model did not include the Lordstown plant, right?
 - A. It did not.

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- Q. So your generation deliverability study did not include the Lordstown plant, right?
- A. No, it did -- it was not in because it hadn't met the requirements for the PJM to include them in there.
- Q. And the RPM 2017-2018 base case model did not include the Lordstown plant, correct?
 - A. Correct. An in-service date beyond that in-service date, so it wouldn't have been included also for that reason.
- Q. So your load -- excuse me. The load deliverability analysis did not include the Lordstown plant, correct?
 - A. It did not include it.
- Q. Are you familiar with the Rolling Hills generation station in Vinton County, Ohio?
- A. I know the Rolling Hills plant in the generation queue, yes.
 - Q. Are you aware that it is converting from

a baseload combined cycle -- excuse me. It's being converted to a combined cycle and peaking station?

- A. I don't know the specifics. I just know it is in the generation queue for adding 610 megawatts.
- Q. Was this power plant included in your study?
 - A. I -- for that one I don't -- I don't know if it was in the model or not.
 - Q. You don't know if it was in the 2019 base case model or the RPM 2017-2018 base case model; is that right?
 - A. That's correct.
 - Q. Are you aware that there is a power plant being built in Middletown, Ohio, the Middletown Energy Center?
- A. Yes.

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- Q. Was that plant included in your study?
- A. I don't know what -- if that plant was in the study or not.

EXAMINER PRICE: All other variables

being equal, what's the impact if these plants had

been in the study? Does it lessen. We presented a

-- why don't you answer my question first. If the

new plants do come on line, does that lessen the need

for these transmission investments?

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THE WITNESS: Those -- those plants are located in a variety of different places around -- around the state. A couple of them we discussed, two of them are in the ATSI territory, and the rest of them are in AEP, and some of the -- a couple others are even further south.

So when you look at the transmission system, it's always good when you have new generators, megawatts. That's a good thing. But when you study it from a load flow perspective, what you are doing is you are removing the Davis-Besse to Sammis, and the transmission system was built for that generation to flow out of those stations, and so the transmission system is built for how that's going to flow.

Now, when you add the other new plants, that's a good thing that it's replacing megawatts, but when the generation does not go back in the exact same spot in the exact same amount and connected the same way, the net flows on the system are totally different. So even though you bring on additional generation, they are still going -- the flows are different, and you can still have overloads that could help some, but you have to -- you have to do

the study because they are just totally connected different places, and the flows drastically change the way the system works.

EXAMINER PRICE: Okay. And you presented -- Mr. Cunningham initially presented and you adopted a conservative estimate of upgrades; is that correct, four hundred some million dollars; is that correct?

A. That's correct.

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EXAMINER PRICE: And you also presented a -- I won't say -- a less conservative estimate of over a billion dollars; is that right?

THE WITNESS: Yes.

EXAMINER PRICE: And if these facilities that Mr. Moore is discussing come online, does that mean that it is more likely to be the less conservative or the more conservative estimate, or does it have no impact at all?

THE WITNESS: Until you did the study you won't know for sure because, as I indicated, they are not going back in the same location so the system was built for that much power flowing out from there so now when these generators are located other places, the flows are still different on the system, so you can see overloads. And depending on what type of

contingency happened, the flows are still all different so that's the reason why you have to do the study. So even though you add those, you -- I believe based on experience you would still have overloads. Now, what's the magnitude? How many? You would not know that until you did the study and had those all included in there.

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EXAMINER PRICE: Similarly you assumed a June 1, 2017, as a retirement date; is that correct?

THE WITNESS: Yes.

EXAMINER PRICE: And if the actual retirement date -- you picked a different assumed retirement date, June 1, 2019, would that have any impact on whether the conservative estimate or the less conservative estimate is more appropriate, or do you not know because you would have to model it?

THE WITNESS: No. In our case if you would say that Sammis and Davis-Besse retired by June 1, 2019, the gen to load study and N-1 study we did was against a 2019 RTEP so that would have the same results which would produce the same amount of overloads that we saw.

EXAMINER PRICE: Thank you, Mr. Moore.

Mr. Moore, why don't you wrap up your current line of questioning and we will call it a day, whenever you

get to a natural breaking point, I am just saying.

MR. MOORE: Okay.

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- Q. (By Mr. Moore) Could you have included the plants we were just speaking about in your study?
- A. We were following the PJM procedure, and we were following to make sure that our process would match the same results PJM would get. So we used their base cases, and we would not add those because that would be changing the process that PJM would be using.
 - Q. Could you have added them?
- A. You can edit a model to add anything you wanted, so you could do that, but as I indicated, we were trying to get the same answers that PJM would do. And PJM would not include those generators if they did not meet the in-service date or if they had not signed a facilities' study agreement or interconnection agreement. If those were not included in there by PJM, then we would not add them.
- Q. The three plants I just mentioned, the Lordstown plant, the Rolling Hills generation station, and the Middletown plant, do you know if any of those three plants cleared the BRA, the recent BRA?
 - A. I am not familiar with those plants in

anything in the performance capacity market.

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EXAMINER PRICE: Do you know if

Davis-Besse or Sammis cleared the most recent BRA?

THE WITNESS: No.

EXAMINER PRICE: Do you know whether the companies or their parent companies have publicly announced that Davis-Besse or Sammis cleared the transitional auctions that were recently held?

THE WITNESS: I have personally not read anything or seen anything.

EXAMINER PRICE: Thank you.

- Q. For clarity of the record can you explain what you meant by N-1-1 studies that you mentioned earlier?
- A. Yes. So the N-1-1 study is a contingency analysis that you do against the base case. And what that involves is you have your power flow model and you take one -- you have one contingency, for an example some transmission line tripping out, so you -- that transmission line trips out. Then -- then you have another line that trips out and that's where they call it N-1-1. What it is, the first one trips and there is a procedure you go through that you trip out and you see what type of overload you have. And then you have to be able to redispatch the

generation to bring the system back under control, back within its normal limits. And if you can't do that, then that will count as a violation.

Then after that occurs, then you take another contingency right after that again to see then if you have a voltage violation or a thermal overload that's above the emergency limits.

MR. MOORE: I think this is a good stopping point.

EXAMINER PRICE: Okay. At this time we will adjourn for the evening. We will convene again at 9 o'clock tomorrow. Thank you all. We are off the record.

(Thereupon, at 5:14 p.m., the hearing was adjourned.)

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1	CERTIFICATE
2	I do hereby certify that the foregoing is
3	a true and correct transcript of the proceedings
4	taken by me in this matter on Monday, September 21,
5	2015, and carefully compared with my original
6	stenographic notes.
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10	Kanan Cua Cibaan Dagiatanad
11	Karen Sue Gibson, Registered Merit Reporter.
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Case No(s). 14-1297-EL-SSO

Summary: Transcript In the Matter of the application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company hearing held on 09/21/15 - Volume XV electronically filed by Mr. Ken Spencer on behalf of Armstrong & Okey, Inc. and Gibson, Karen Sue Mrs.