

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

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In the Matter of the :
Application of Ohio Edison:
Company, The Cleveland :
Electric Illuminating :
Company, and The Toledo :
Edison Company for : Case No. 14-1297-EL-SSO
Authority to Provide for :
a Standard Service Offer :
Pursuant to R.C. 4928.143 :
in the Form of an Electric:
Security Plan. :

- - -

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 9 a.m. on
Wednesday, September 16, 2015.

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VOLUME XII

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1 Wednesday Morning Session,
2 September 16, 2015.

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4 EXAMINER ADDISON: The Public Utilities
5 Commission of Ohio has set for hearing at this time
6 and place Case No. 14-1297-EL-SSO, being in the
7 Matter of the Application of Ohio Edison Company, The
8 Cleveland Electric Illuminating Company, and The
9 Toledo Edison Company for Authority to Provide for a
10 Standard Service Offer Pursuant to R.C. 4928.143 in
11 the Form of an Electric Security Plan.

12 My name is Megan Addison, and with me is
13 Gregory Price, and we are the attorney examiners
14 assigned by the Commission to hear this case.

15 We'll dispense with taking appearances
16 this morning and start immediately with Mr. Harden.

17 Mr. Harden, if you could raise your right
18 hand, please.

19 (Witness sworn.)

20 EXAMINER ADDISON: Please state your name
21 and business address for the record, please.

22 THE WITNESS: My name is Paul A. Harden.
23 My business address is 341 White Pond Drive, Akron,
24 Ohio.

25 EXAMINER ADDISON: Thank you, Mr. Harden.

1 Ms. Hussey, do you have any questions for
2 the witness?

3 MR. LANG: I think if we can proceed with
4 direct first.

5 EXAMINER ADDISON: Oh, I'm so sorry.
6 Apologies. Go ahead.

7 (EXHIBIT MARKED FOR IDENTIFICATION.)

8 MR. LANG: Thank you, your Honor. Your
9 Honors, we have marked his testimony as Company
10 Exhibit 32.

11 - - -

12 PAUL A. HARDEN
13 being first duly sworn, as prescribed by law, was
14 examined and testified as follows:

15 DIRECT EXAMINATION

16 By Mr. Lang:

17 Q. So, Mr. Harden, if I could ask you
18 whether you have Company Exhibit 32 in front of you.

19 A. I do.

20 Q. And can you describe what Exhibit 32 is?

21 A. Exhibit 32 is my direct testimony.

22 Q. Do you have any corrections to make to
23 your direct testimony?

24 A. I do.

25 Q. Start with the first one.

1 A. Okay. The first one on line 3, it has my
2 title as "Senior Vice President, Fleet Engineering."
3 My title is currently "Senior Vice President and
4 Chief Operating Officer."

5 Q. And that would be line 3, page 1?

6 A. That is correct, line 3, page 1.

7 Q. Do you have other corrections to make?

8 A. Yes. Also on page 1, on line 20, where
9 it says "As Senior Vice President, Fleet Engineering,
10 I am responsible," the "am" should be changed to
11 "was." And on line 22, again where it says "I am
12 responsible," it should be changed to "I was
13 responsible."

14 Q. Mr. Harden, if I were to ask you the
15 questions in Company Exhibit 32 today as you have
16 just corrected it, would your answers be the same?

17 A. Yes, they would.

18 MR. LANG: Your Honor, Mr. Harden is
19 available for cross.

20 EXAMINER ADDISON: Thank you, Mr. Lang.

21 Ms. Hussey, now would you like to begin?

22 - - -

23 CROSS-EXAMINATION

24 By Ms. Hussey:

25 Q. Good morning, Mr. Harden.

1 A. Good morning.

2 Q. I have a quick follow-up for you just on
3 the clarification you just made with Mr. Lang. As
4 far as page 1, line 3, you are no longer -- the title
5 "Fleet Engineering" should not appear in your title
6 any longer; is that correct? Or should it read
7 "Senior Vice President, Fleet Engineering and Chief
8 Operating Officer"?

9 A. No. The fleet engineering is no longer
10 part of my title.

11 Q. Okay. Thank you. I believe you just
12 testified that you are senior vice president and
13 currently the chief operating officer for FirstEnergy
14 Nuclear Operating Company or FENOC, correct?

15 A. That is correct.

16 Q. Okay. And in that role or in your former
17 role as senior vice president of fleet engineering,
18 you testified on page 1 at line 20 that you were
19 responsible for all site and fleet engineering and
20 nuclear fuel design and procurement functions that
21 support FENOC's three nuclear generating stations; is
22 that accurate?

23 A. Yes.

24 Q. And Davis-Besse is among those?

25 A. Yes.

1 Q. And is the Perry facility among those?

2 A. Yes.

3 Q. Okay. What is the final facility to
4 which you refer?

5 A. The final facility, nuclear facility, is
6 the Beaver Valley power station.

7 Q. Thank you. I believe you reference site
8 engineers in your testimony. Does FENOC have
9 engineers that are specifically assigned to each of
10 the three facilities you just referenced?

11 A. Yes.

12 Q. Okay. And those individuals are
13 considered site engineers?

14 A. Yes.

15 Q. Do you supervise or did you supervise all
16 those individuals at the time you filed your
17 testimony?

18 A. Well, I guess let me clarify your
19 question. Are you asking did I directly supervise
20 them, or was I responsible for them relative to them
21 being in my organization?

22 Q. If you could explain what your
23 supervisory role vis-a-vis their roles would be, that
24 would be well appreciated.

25 A. Yes. As fleet vice president of

1 engineering, all of the engineers at the sites did
2 directly report up through my organization.
3 Individual level engineers were several levels
4 removed from me. There's managers, directors in
5 between, but they all directly rolled up under my
6 organization.

7 Q. Thank you. Now, you testified that you
8 were also responsible for the fleet engineering and
9 technical support for all fossil fuel generating
10 stations in the FirstEnergy subsidiaries; is that
11 accurate?

12 A. Yes.

13 Q. Would the subsidiaries to which you refer
14 include FirstEnergy Solutions?

15 A. Yes.

16 Q. And for clarity of the record and to the
17 extent you know, are FirstEnergy Solutions and FENOC
18 corporate affiliates?

19 A. FENOC and FirstEnergy Solutions are two
20 separate entities under the FirstEnergy company.

21 Q. Thank you for that clarification. And
22 FirstEnergy Generation is a part of FES; is that
23 accurate?

24 A. Yes.

25 Q. Okay. Would you agree that the Sammis

1 plant is owned by FirstEnergy Generation, not FENOC?

2 A. Yes.

3 Q. And is FirstEnergy -- strike that.

4 You're employed by FENOC, correct?

5 A. Yes.

6 Q. But in your role -- or your former role
7 as senior VP of the fleet engineering, you had
8 responsibilities associated with fleet engineering
9 and technical support for all of FES fossil fuel
10 generating units, correct?

11 A. Yes.

12 Q. And we talked about site engineers a few
13 moments ago. To your knowledge, does Sammis have
14 specifically assigned site engineers?

15 A. Yes, they have some engineers that are
16 assigned to the site.

17 Q. Okay. And in the role that you described
18 earlier, did you supervise in some respect those
19 individuals?

20 A. No. The engineers that are specifically
21 assigned to the Sammis plant on a permanent basis did
22 not report up through me.

23 Q. Okay. And who would they have reported
24 up through?

25 A. They would report up through a manager

1 that reports to the station director that runs that
2 site.

3 Q. Okay. Thank you. And that individual
4 would have been employed by FirstEnergy Solutions; is
5 that correct?

6 A. Would have been employed by FirstEnergy
7 Generation, which is owned by FirstEnergy Solutions.

8 Q. Thank you for that clarification. Could
9 you describe for me what a fleet engineer does?

10 A. That's a broad question.

11 Q. How about for fossil units, a fleet
12 engineer for fossil units?

13 A. So a fleet engineer for the fossil units
14 are typically the subject matter experts on various
15 areas such as components, transformers, motors,
16 pumps, vibration experts, those types of subject
17 matter experts. Rather than having one assigned to
18 each site, they are all fleet employees that reported
19 up through my organization. So they provide that
20 expertise across all of the fossil fleet.

21 Q. Okay. Thank you. And those
22 individuals -- any individuals who would be
23 considered fleet engineers assigned to FES's fossil
24 fleet would have reported not directly to you but up
25 through you; is that correct?

1 A. Could you repeat that question?

2 MS. HUSSEY: Could you reread it? If I
3 need to clarify, I'd be happy to.

4 (Record read.)

5 A. Yes, yes, that's correct.

6 Q. Thank you. Would you turn to page 2 of
7 your testimony.

8 A. 2?

9 Q. Uh-huh. And your testimony discusses the
10 operations of the Sammis plant owned by FES, the
11 Davis-Besse plant owned by FENOC, and also the
12 operations of the OVEC plant, the output to which FES
13 has an entitlement; is that correct?

14 A. No. The Davis-Besse plant is not owned
15 by FENOC.

16 Q. Okay.

17 A. Davis-Besse is owned by FirstEnergy
18 Nuclear Generation.

19 Q. Okay. And is that a division or
20 affiliate of FENOC?

21 A. No. FirstEnergy Nuclear Generation is
22 owned by FES. FENOC is just an operating company.
23 They do not own the plants. They just operate the
24 plants.

25 Q. Okay. Thank you for that clarification.

1 Let's turn our attention to Davis-Besse. You
2 testified that Davis-Besse is a nuclear generating
3 plant that has been in operation since 1977, correct?

4 A. Yes.

5 Q. And you further testified that
6 Davis-Besse is designed to be a baseload unit rated
7 at 908 megawatts; is that correct?

8 A. Yes.

9 Q. How would you define baseload unit?

10 A. A baseload unit is a designation
11 typically used when a plant is originally designed
12 and built to designate those that from their
13 inception are intended to operate pretty much at full
14 power all the time. That said, given how the markets
15 have changed since most of these facilities were
16 built, what's a baseload and what's not a baseload is
17 pretty much blurred by economic dispatch. A baseload
18 plant can be run all the time. A plant that was
19 originally designed to be load following can be run
20 all the time if it's dispatched as such.

21 Q. Thank you. And are there certain types
22 of generating units that use certain types of fuel
23 that you would say would not be able to qualify as
24 baseload facilities?

25 A. Yes. There are many types of generating

1 facilities that would not qualify as a baseload.
2 Anything that has an intermittent supply would not be
3 a baseload. Wind would be a good example of an
4 intermittent supply. Solar would be a good example
5 of an intermittent supply. A hydro facility that
6 relies upon a pump storage pool would be considered
7 an intermittent supply and, therefore, I would not
8 call baseload.

9 Q. What about a natural gas facility with a
10 firm supply?

11 A. I guess I'm not sure what you consider to
12 be a firm supply, but a natural gas facility
13 certainly can be dispatched all the time.

14 Q. Thank you. In your opinion, is
15 Davis-Besse operated as a baseload unit?

16 A. Yes.

17 Q. And as a nuclear generating facility,
18 Davis-Besse must maintain an operating license from
19 the United States Nuclear Regulatory Commission or
20 NERC, correct?

21 A. The first part, Nuclear Regulatory
22 Commission, yes, not the NERC.

23 Q. And would you affirm that Davis-Besse's
24 operating license is current and approved today?

25 A. Yes.

1 Q. And when does the currently-approved
2 operating license expire?

3 A. Current license expires in 2017, and
4 there is an application for renewal that is in its
5 final steps of approval that will extend that license
6 for another 20 years once it has been approved.

7 Q. Thank you. And we'll get to that in just
8 a few minutes.

9 Are you familiar with the transaction
10 proposed between Ohio Edison Company, The Cleveland
11 Electric Illuminating Company, and The Toledo Edison
12 Company, or collectively the companies, and FES that
13 is one component of the application that's been filed
14 in this case?

15 A. Yes.

16 Q. And we understand if I refer to the
17 previously-mentioned transaction as the proposed
18 transaction?

19 A. Yes.

20 Q. Thank you. For the sake of reference, do
21 you have a copy of Sierra Club Exhibit 1 in front of
22 you?

23 A. Yes, I do.

24 Q. And to your understanding, is the term
25 sheet memorializing the terms of the proposed

1 transaction between the companies and FES?

2 A. Yes, it is.

3 Q. Are you familiar with the term of the
4 proposed transaction outlined in the term sheet?

5 A. If you're referring to the delivery
6 period, section 10, from June 1st of 2016 to May 31
7 of 2031, yes.

8 Q. Thank you. Is it your understanding that
9 the currently-approved operating license for
10 Davis-Besse which expires in 2017 without being
11 renewed would expire during the term of the proposed
12 transaction?

13 A. If it were not renewed, it would expire.
14 I don't expect that to be the case.

15 Q. Okay. Thank you. And you testified that
16 in August 2010, FENOC filed a license renewal
17 application with the U.S. Nuclear Regulatory
18 Commission, correct?

19 A. Yes.

20 Q. And in that application, FENOC has
21 requested renewal of the Davis-Besse operating
22 license for a 20-year period beyond the expiration of
23 its current license term, which is 2017?

24 A. Yes.

25 Q. And to date, has FENOC's license renewal

1 application for Davis-Besse been approved?

2 A. No. It has not received final approval.
3 It has gone through all of the technical review. It
4 has received the supplemental environmental report.
5 It's received its draft safety evaluation report.
6 All of the intervention has been dismissed or denied
7 and the Atomic Safety and Licensing Board proceedings
8 for such intervention has been closed and there are
9 two final procedural steps prior to final approval
10 and issuance.

11 Q. Thank you. But as of today, the approval
12 has not been issued, correct?

13 A. Correct.

14 Q. Okay. Thank you. Let's turn to Sammis.
15 On page 5, beginning at line 4, you testified that
16 Sammis is comprised of seven coal-fired units that
17 collectively produce 2,220 megawatts of electricity,
18 correct?

19 A. Yes.

20 Q. Would you agree that the Sammis units are
21 in the range of 43 to 55 years old?

22 A. Yes.

23 Q. Okay. If you could turn your attention
24 to line 7. You state that "Units 6 and 7 are
25 designed to be baseload units rated at

1 1,200 megawatts," correct?

2 A. Yes.

3 Q. And in your opinion, are units 6 and 7
4 operated as baseload units?

5 A. Yes.

6 Q. Okay. And you further testified that
7 "Units 1 through 5 are load-following units rated at
8 1,020 megawatts," correct?

9 A. Yes.

10 Q. Could you provide your opinion -- or,
11 excuse me, your definition of what a load-following
12 unit is?

13 A. I can give you my interpretation of what
14 a load-following unit is, and that's a unit that is
15 cycled up and down for peak power periods typically
16 to supplement what is provided all the time by a
17 baseload plant as demand on the grid cycles up and
18 down.

19 Q. Thank you.

20 EXAMINER PRICE: Does it pose an
21 engineering problem for a unit that was designed to
22 be baseload to be used as load following or vice
23 versa, a unit that was designed to be load following
24 to be used as baseload?

25 THE WITNESS: To some extent in some

1 cases, and that requires a little explanation. A
2 baseload plant, you can take it to full power and you
3 can take it to some level of reduced power without
4 really challenging much of the equipment; however, if
5 you take it below a certain point where you have to
6 start shutting off the major pumps and equipment, it
7 then can cause an engineering challenge or an
8 equipment reliability challenge for the unit.

9 On the flip side for a plant that was
10 originally designed to be a load-following unit, to
11 dispatch it at full power all the time really doesn't
12 pose any technical or engineering challenges for that
13 plant. It actually is easier on much of the
14 equipment that's not being cycled up and down, and
15 you can actually achieve better reliability out of
16 them if you are running them at full power all the
17 time.

18 EXAMINER PRICE: Thank you.

19 Thank you, Ms. Hussey.

20 Q. (By Ms. Hussey) By definition, if a unit
21 is functioning as a load-following unit at that
22 point, it is not functioning as a baseload unit at
23 that point in time; is that correct?

24 A. It's actually a little more confusing
25 than that in practice because what they were designed

1 to do and what they do in the current energy markets
2 are quite a bit different in that most plants get run
3 how they get dispatched on the dispatch curve in the
4 PJM markets. Now, that might be different in
5 regulated markets but in the PJM markets, you will
6 find times of the year that load-following units are
7 dispatched to run flat out at 100 percent power most
8 of the time. And you would also conversely find
9 times of the year where plants that were designed to
10 be baseload units will be reduced to what we refer to
11 as minimum load. And that's the minimum level that I
12 was just referring to below which you would have to
13 start turning off major equipment that could
14 challenge the plant.

15 Q. Thanks for that explanation. If a unit
16 is functioning as a baseload unit at one point in
17 time, can it also be functioning as a load-following
18 unit at that same point in time? Is it a
19 one-or-the-other proposition at a given point in
20 time?

21 A. Not in my definition they can't be. I
22 guess I would explain it as the terms we used when we
23 originally designed and built many of the generating
24 facilities baseload versus load following are hardly
25 even applicable in the current environment. Because

1 one could be dispatched all the time regardless of
2 what it was designed for or some could be turned down
3 to their minimum load even though they were
4 originally designed to be baseload. So in all
5 honesty, I don't think of plants anymore with a
6 designation of baseload or load following. It's just
7 a matter of where they're at on the dispatch curve
8 and how they get dispatched.

9 Q. If a unit is operated as a load-following
10 unit, is it more susceptible to outages than a plant
11 that would be operated as a baseload unit?

12 A. I don't know that I would say that it's
13 more susceptible to outages, per se, but it may be
14 more susceptible to equipment reliability issues.
15 Some equipment reliability issues can lead to
16 outages, others would not, but by the nature of
17 cycling equipment on and off as you take a plant from
18 full load to no load does pose a harsher environment
19 for some of the equipment.

20 Q. Okay. And on page 5 -- just one moment.
21 I'm sorry.

22 Page 5, line 9, you testified that "The
23 plant uses an average of 18,000 tons of coal daily,"
24 and that that includes coal from Ohio mines; is that
25 correct?

1 A. Yes.

2 Q. What percent of the coal that's used at
3 Sammis would you say is coal from Ohio coal mines?

4 A. From memory, I can give you an
5 approximation. I don't know that I can give you a
6 precise value, but it's around 50 percent, slightly
7 over 50 percent.

8 Q. Thank you. And you further testify at
9 line 14 that approximately \$52 million each year is
10 spent on Ohio coal alone, correct?

11 A. That is correct.

12 Q. What do you mean by Ohio coal there?

13 A. The 52 million is an approximation of the
14 amount of coal that is actually mined in the state of
15 Ohio under one of the contracts we have with a
16 company that has mines in Ohio, as well as some of
17 the surrounding areas.

18 Q. Okay. Thank you. With regard to the
19 Sammis units' boilers, is it true that units 1
20 through 5 are subcritical boilers?

21 A. Yes.

22 Q. And the boilers for units 6 and 7 are
23 supercritical, correct?

24 A. Yes.

25 Q. On page 8 at line 8 you refer to Sammis'

1 wet flue gas desulfurization retrofit, and I wondered
2 if that is the same retrofit to which you refer on
3 page 10 at line 15.

4 A. Yes, it is.

5 Q. And on page 10, line 15, you refer to wet
6 FGD or scrubbers, correct?

7 A. Yes.

8 Q. And on a high level could you describe
9 what FGD technology does?

10 A. Yes. The wet flue gas desulfurization
11 scrubbers, it's just a system by which you use lime,
12 which is calcium carbonate and you get the lime to
13 react with the sulfur dioxide and the reaction
14 creates calcium sulfate which is then oxidized to
15 create calcium sulfate which is gypsum. So it's just
16 a chemical reaction. It's a system that causes the
17 chemical reaction to get the sulfur dioxide to
18 precipitate out in a form of gypsum and reduce the
19 SO-2 emission levels from the plant.

20 Q. Thank you.

21 EXAMINER PRICE: Do you dispose of the
22 gypsum, or do you recover it for some productive use?

23 THE WITNESS: Are you asking specific to
24 Sammis or in general?

25 EXAMINER PRICE: Sammis, and then you can

1 answer in general, both.

2 THE WITNESS: At Sammis, much of the
3 gypsum is disposed of in a landfill. That said, it
4 can be -- I'll call it purified. It has to meet a
5 certain spec to be used in drywall. It can be made
6 to meet that spec, and for Sammis in particular,
7 we've been exploring that. There is another
8 generating facility within FirstEnergy that supplies
9 quite a bit of its gypsum to a drywall company and we
10 are also evaluating the capabilities of Sammis to
11 meet the specification to also supply it.

12 EXAMINER PRICE: Thank you.

13 Q. (By Ms. Hussey) To your knowledge, what
14 was the impetus for the companies and FirstEnergy
15 Solutions \$1.8 million wet FGD retrofit?

16 MR. LANG: Can I have the question read
17 back, please.

18 EXAMINER ADDISON: You may.

19 (Record read.)

20 MR. LANG: Just to clarify, when you say
21 the companies and FES, did you intend to refer to
22 both?

23 MS. HUSSEY: Yes, I did.

24 A. I don't believe the companies had
25 anything to do with the decision; however, I was not

1 with FirstEnergy when the decisions were made. The
2 decisions to install the scrubbers were made in the
3 mid-2000 time frame, and I can't tell you exactly
4 what year. It was well before 2010. This was a very
5 large project that took many years to design and
6 complete. I joined FirstEnergy in 2008, and the
7 decision had already been made. So I cannot speak to
8 the bases behind that decision.

9 Q. Okay. And, to your knowledge, were the
10 retrofit investments as a result of a settlement
11 entered into with the USEPA?

12 A. I can't answer whether they were a direct
13 result of the settlement, whether they would have
14 been done otherwise, but they were part of a
15 settlement that consecrated a consent decree that the
16 Sammis plant is operated under.

17 Q. Okay. And, to your knowledge, as part of
18 that settlement that was part of the consent decree,
19 did FES commit to reduce 212,500 tons of SO-2 in NOx
20 emissions to be reduced annually based on 2003
21 emission levels?

22 A. Although I'm fairly familiar with the
23 consent decree, the actual numbers and values in it,
24 I do not remember.

25 Q. Okay. Thank you. And the equipment that

1 was installed as part of the retrofit is equipment
2 that would reduce SO-2 and NOx emissions, correct?

3 A. Yes. The equipment installed included
4 the scrubbers for SO-2. It included the SCRs, the
5 selective catalytic reduction. It included low NOx
6 burners. It included a technology called overfired
7 air which also reduces NOx emissions, and so it
8 was -- and it also included electrostatic
9 precipitators which reduced particulate matter.

10 Q. Thank you. And you also refer to unit 6
11 and 7 being retrofitted with selective catalytic
12 reduction or SCR technology in 2010, correct?

13 A. Yes.

14 Q. And could you explain the SCR process and
15 what it is designed to do?

16 A. Yes. An SCR or selective catalytic
17 reduction, in simple terms, it uses a catalyst to
18 cause a reaction between ammonia and NOx and the
19 reaction causes a resulting product to be just free
20 of nitrogen and water.

21 Q. Okay. And you also testify that units 1
22 through 5 are equipped with selective non-catalytic
23 reduction technology or SNCR, correct?

24 A. Yes.

25 Q. And SNCR is also designed to control NOx,

1 correct?

2 A. Yes.

3 Q. Is SNCR as effective at controlling NOx
4 as SCR?

5 A. No. SNCR by itself is not as effective
6 at reducing NOx. That said, when you define SNCR
7 with low NOx burners and with overfired air, it
8 results in a substantial reduction in NOx, just not
9 as much as an SCR does.

10 Q. Thank you. And, to your knowledge, does
11 FES intend to install SCR technology on units 1
12 through 5 during the term of the proposed
13 transaction?

14 A. You're asking me what we'll do in the
15 future, and I guess I can't answer what we'll do in
16 the future in a definitive term. Right now, we --
17 FES, to my knowledge, has no intention to put SCRs on
18 units 1 through 5.

19 Q. And from my understanding, you provided
20 Mr. Lisowski with the environmental capital costs
21 that are forecast through 2018; is that correct?

22 A. That is correct.

23 Q. Okay. So it's fair to say that through
24 2018, you have no plans or FES has no plans to
25 install SCR technologies on units 1 through 5,

1 correct?

2 A. That is correct.

3 Q. With regard to particulate matter or PM
4 reductions, you testified that units 1 through 4 have
5 installed baghouse technology, correct?

6 A. Yes.

7 Q. And I believe you mentioned earlier that
8 units 5 through 7 have electrostatic precipitators.

9 A. Yes.

10 Q. Okay. Let's turn briefly to OVEC. And I
11 believe you testified that the plant has a baseload
12 and nameplate capacity of 1,304 megawatts; is that
13 correct?

14 A. Yes.

15 Q. In your opinion, are the OVEC plants
16 operated as baseload generating units?

17 A. Yes.

18 Q. And what types of boilers do the OVEC
19 units utilize?

20 A. I believe they're subcritical.

21 Q. All of the Clifty Creek and Kyger Creek
22 units, to your understanding, are subcritical?

23 EXAMINER ADDISON: Let's go off the
24 record for a moment.

25 (Discussion off the record.)

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

3 Thank you, Ms. Hussey. You may proceed.

4 MS. HUSSEY: Can you tell me if there's a
5 pending question?

6 (Record read.)

7 Q. Is that correct?

8 A. Yes, that's my understanding.

9 Q. Can you turn to page 9 of your testimony.
10 You state that the "baseload units are the bedrock
11 that ensures reliability for retail customers by
12 operating around the clock." What do you mean by
13 around the clock?

14 A. What I mean by around the clock is
15 baseload plants are typically the plants that are
16 operating all the time so that the lights come on
17 when we flip the switches in our homes.

18 Q. Okay. And if a unit experiences lengthy
19 outages, whether planned or unplanned, would you
20 still consider it a baseload unit?

21 A. Yes. Typically outages, planned or
22 unplanned outages, don't define how a plant operates
23 relative to whether it's running at full capacity or
24 whether it's cycling up and down. Therefore, I would
25 consider a plant to be baseload if it runs at full

1 power all the time regardless of how it's scheduled
2 or unplanned outages fall.

3 Q. Okay. And would you consider a plant to
4 be operating as a baseload unit during the time of an
5 outage?

6 A. As I stated earlier, using the terms
7 baseload and load following in the current
8 environment is actually to me a confusing way to look
9 at it. If a plant is capable of running all the time
10 and it typically gets dispatched all the time, I
11 would consider it to be baseload whether it's in an
12 outage or not.

13 Q. Okay. With that caveat, you did state in
14 your testimony that baseload units of the bedrock
15 that ensures liability for retail customers by
16 operating around the clock and so on, though,
17 correct?

18 A. That is correct, because a baseload unit
19 typically schedules its outages during periods of the
20 lowest demand when they're not needed, or when, you
21 know, over the bases of a fleet or in the case of
22 PJM, we schedule our outages so that PJM can make
23 sure there's adequate capacities, energy, as well as
24 reserves available, and the outages are typically
25 scheduled like that so that the plants are still

1 there when they need to be there to meet the demand
2 of the system.

3 Q. Let's turn our attention to a bit
4 different topic. Were you part of the FES team that
5 evaluated the proposed transaction?

6 A. Yes, I was.

7 Q. Okay. And what was your role on the
8 team?

9 A. I was a member of the FES team, mostly
10 there to provide technical input and perspective from
11 the operating plant perspective of things.

12 Q. Okay. And you have Sierra Club Exhibit 1
13 in front of you. Did you offer specific input on any
14 of the items reflected in the term sheet?

15 A. Yes.

16 Q. Okay. And could you identify those
17 sections for me?

18 A. It was a long time ago, so I'm not sure I
19 can be all inclusive, but I can give you the areas
20 that I remember providing quite a bit of input on.

21 Q. That would be helpful. Thank you.

22 A. Unit contingent I provided a lot of input
23 on.

24 Q. Would that be section 8?

25 A. Section 8. Of course, section 4 of the

1 facilities, I'm quite sure I provided the input on
2 the description of the facilities.

3 Q. Thank you.

4 A. Section 11 under operating work, the term
5 good utility practice, I provided input on the term
6 good utility practice. I'm quite certain I provided
7 some input on section 13, which is contract price.

8 Q. Could you clarify which aspects of the
9 contract price you provided input on?

10 A. I can comment on what I remember given
11 the length of time that's passed. I do remember
12 providing input on fuel payment and fuel expense to
13 make sure its characterized accurately to how fuel
14 payments and fuel expenses are accounted for.

15 MR. LANG: Sorry. Did counsel want him
16 to continue identifying sections?

17 MS. HUSSEY: I believe he indicated that
18 he was going to identify the sections that he had
19 input on for this particular section.

20 A. I also had quite a bit of input on
21 definitions. Now, as I say, input, those would be
22 sections where I provided quite a bit of the input
23 and proposed direction; however, as a team member, I
24 was in discussion on many of the sections of the term
25 agreement -- or the term sheet I mean.

1 Q. Okay. And going back to section 13, I
2 believe you indicated you had input on the fuel
3 payment section. Did you have input on the O&M
4 payment section?

5 A. Yes.

6 Q. Okay. And what about the depreciation
7 payment section?

8 A. I don't remember having much input, if
9 any, on the depreciation.

10 Q. Okay. And the capacity payment section?

11 A. I also don't remember providing much, if
12 any, input on the capacity section.

13 Q. And the tax-free reimbursement payment
14 section?

15 A. I'm pretty certain I provided no input on
16 tax reimbursement.

17 Q. Okay. And what about the last section,
18 the OVEC entitlement interest appearing in that
19 section?

20 A. I don't remember providing any input on
21 the OVEC section.

22 Q. Okay. Thank you. And planned outage
23 schedule, did you contribute input to that section?

24 A. I remember taking part in those
25 discussions. I couldn't state how much input I

1 provided, but I do remember taking part in
2 discussions on it.

3 Q. Okay. Thank you. If you could turn back
4 to section 8, the unit contingent section.

5 A. Okay.

6 Q. There is a proviso appearing provided
7 that seller's failure to deliver capacity, energy,
8 ancillary services not be excused if the seller could
9 have avoided such failure by exercise of good utility
10 practice; is that accurate?

11 A. Yes.

12 Q. And did you contribute the definition of
13 good utility practice in the course of negotiations
14 of this term sheet?

15 A. Yes, I did.

16 Q. Okay. And could you provide that
17 definition for me?

18 A. The definition is as listed on page 14 of
19 the attachment.

20 Q. Okay. Thank you. And who makes the
21 determination under the term sheet of whether the
22 seller could have avoided failure by exercise of good
23 utility practice if, in fact -- strike that. Let me
24 go back quickly.

25 There's a provision within the section

1 that indicates that if seller's failure to deliver
2 capacity, energy, or ancillary services could be
3 avoided by exercise of good utility practice, then
4 the failure to delivery such energy, capacity, and
5 ancillary services will be excused for the first 180
6 consecutive days and so on, and I'm wondering who
7 makes the definition of whether the seller could have
8 avoided failure by exercise of good utility
9 practices.

10 A. Well, I guess how I would answer that,
11 it's similar to most contracts that I've been
12 involved with in my career, the seller has the
13 responsibility to implement the good utility practice
14 and define what that practice is. The buyer then has
15 the opportunity to challenge whether they agree with
16 whether that was a good utility practice or not, and
17 that would be consistent with most types of contracts
18 I've been involved in in my career.

19 Q. As part of the FES team, was that your
20 understanding that it was the case with this
21 particular term sheet of the proposed transaction?

22 A. Consistent with what I just said. My
23 understanding was and the intention all along was
24 FES, as it does today, will continue to operate these
25 plants in accordance with good utility practice and

1 ensure they're performing in accordance with good
2 utility practice, and the companies have the
3 opportunity to challenge that if they disagree.

4 Q. Okay. And outside of the definition of
5 good utility practice and your understanding, is that
6 memorialized anywhere in this document, to your
7 knowledge?

8 A. No. The term sheet provides all the
9 material foundation for the basis for an ultimate
10 agreement.

11 Q. Okay. But it doesn't indicate who makes
12 the judgment of whether good utility practice has
13 actually been exercised.

14 A. No. As I stated, the term sheet has the
15 foundation of all the material areas that are
16 addressed outside of some process issues such as that
17 that would be addressed in the final agreement.

18 EXAMINER PRICE: So you would say that
19 how disputes resolved is a process issue left to the
20 final agreement?

21 THE WITNESS: Yes.

22 EXAMINER PRICE: Fair enough.

23 Q. (By Ms. Hussey) To the extent that you
24 know, do you think that that particular issue or
25 resolving that particular issue may have an impact on

1 ratepayers?

2 A. No, I do not believe it would.

3 Q. And why is that?

4 A. Because I believe that FES has a
5 fundamental responsibility to continue to operate the
6 plants under this agreement in accordance with good
7 utility practices, and if the companies feel they
8 don't, the companies have the right to challenge
9 whether FES is meeting the terms of this agreement
10 once it's put in place as a purchase power agreement.
11 And there will be a process for handling such a
12 challenge. In my experience, that would be typical
13 as it is with most types of contracts between a buyer
14 and a seller.

15 Q. Thank you. To the extent that the
16 Commission disagrees that FirstEnergy Solutions is
17 operating the plants within the realm of good utility
18 practice, does it have any opportunity, to your
19 knowledge, under the term sheet to review, offer,
20 comment, or exercise its concern -- or voice its
21 concerns in any way?

22 MR. LANG: Objection, your Honor.

23 EXAMINER ADDISON: Grounds?

24 MR. LANG: We're a couple steps outside
25 of his testimony. His testimony is about plant

1 operations, obviously affording leeway to the extent
2 that he was testifying on and providing plant
3 operations input with regard to the development of
4 the term sheet. This line of questioning is now
5 going beyond the term sheet and his involvement in
6 the term sheet. And I believe even though it's not
7 clear, asking about rider RRS, and I think even
8 asking about perhaps the audit process related to
9 RRS, that's multiple steps beyond and outside of the
10 scope of his testimony.

11 He's not the right witness to be asking
12 those questions. Ms. Mikkelsen got those questions,
13 did her best to answer those questions in her
14 testimony. So I would object that it's not
15 appropriate and beyond the scope of this witness'
16 testimony to talk about a Commission review process
17 when he is talking about plant operations.

18 MS. HUSSEY: Your Honor, can I respond
19 briefly?

20 EXAMINER ADDISON: You may.

21 MS. HUSSEY: I believe I cautioned or
22 asked the witness just to respond to the extent he
23 knows. So to the extent that he does know, I would
24 be happy to hear a response. To the extent that he
25 doesn't, I understand.

1 EXAMINER ADDISON: I tend to agree.

2 Objection overruled.

3 Do you need that question read back,
4 Mr. Harden?

5 THE WITNESS: No, I don't.

6 A. I don't know.

7 MS. HUSSEY: Okay. Thank you. I don't
8 have any further questions. I appreciate it.

9 EXAMINER ADDISON: Thank you, Ms. Hussey.
10 Let's go off the record.

11 (Discussion off the record.)

12 EXAMINER PRICE: Let's go back on the
13 record.

14 Mr. Fisk.

15 MR. FISK: Thank you, your Honor.

16 - - -

17 CROSS-EXAMINATION

18 By Mr. Fisk:

19 Q. Good morning, Mr. Harden.

20 A. Good morning.

21 Q. You testified a few minutes ago that you
22 were a member of the FES team with regards to
23 negotiating the term sheet, correct?

24 A. Yes.

25 Q. Okay. So in those negotiations you were

1 representing the interests of FES; is that right?

2 A. Yes.

3 Q. And you were not representing the
4 interests of the companies in those negotiations,
5 correct?

6 A. Yes.

7 Q. And with regards to the proposed
8 transaction, you've never spoken with Jay Ruberto; is
9 that right?

10 A. No.

11 Q. No, you haven't spoken to him; or, no,
12 that wasn't right?

13 A. I have not spoken to him relative to the
14 proposed transaction.

15 Q. Okay. If any of the FirstEnergy
16 companies were looking to evaluate compliance with
17 environmental regulations, they would do that through
18 the environmental department of FirstEnergy
19 Generation; is that right?

20 A. Yes.

21 Q. Okay. And you're not aware of anyone
22 else at FirstEnergy outside of the environmental
23 department at FirstEnergy Generation who evaluates
24 environmental compliance; is that right?

25 A. That is right.

1 Q. And I might get this pronunciation wrong,
2 but you spoke with Mike Jurousek in the environmental
3 department regarding environmental compliance at
4 Sammis; is that right?

5 A. Yes, I speak with Mike Jurousek on a
6 regular basis course of business relative to all the
7 generating plants.

8 Q. And so I did pronounce his last name
9 correctly; is that right?

10 A. Yes.

11 Q. Okay. Thank you. And with regards to
12 any testimony you're offering in this proceeding
13 regarding environmental compliance, you spoke with
14 Mr. Jurousek approximately four or five times; is
15 that right?

16 A. I don't remember how many times were
17 specific to this since I speak with him on a regular
18 basis, but I have spoken with him relative to Sammis
19 compliance on numerous occasions.

20 Q. Okay. And outside of any discovery
21 responses you might have drafted, you didn't document
22 your discussions with Mr. Jurousek regarding
23 environmental compliance in this proceeding in any
24 way, right?

25 A. No.

1 Q. And you don't recall Mr. Jurousek sharing
2 any documents with you regarding environmental
3 compliance for this proceeding, correct?

4 A. What do you mean by sharing documents?

5 Q. Did he provide you with any documents
6 that say here's an analysis of Sammis' environmental
7 compliance?

8 A. No, he did not specifically provide me
9 with any documents. We are required to submit to the
10 EPA as well as the Ohio EPA semi-annual reports of
11 compliance for Sammis, and I have read those reports.

12 Q. And that's compliance with current
13 environmental regulations that are in effect.

14 A. That's compliance with the consent decree
15 which is much more restrictive than any current
16 regulations.

17 Q. Okay. But those aren't reports regarding
18 any potential compliance with potential future
19 regulations, correct?

20 A. That's correct.

21 Q. And as a regular part of your job, you
22 periodically see profit and loss statements for the
23 plants; is that right?

24 A. Yes, I do.

25 Q. Okay. And do you recall when the most

1 recent profit and loss statement you have seen for
2 the Sammis plant is?

3 A. Within the last month.

4 Q. You saw it within the last month?

5 A. Yes.

6 Q. Do you know, is it from within the last
7 month?

8 A. I don't remember whether it was for the
9 month of July or August. It was one of those two
10 months.

11 Q. Okay. And do you know who provided that
12 to you?

13 A. Yes, our business services group.

14 Q. And who within the business services
15 group?

16 A. Are you asking by name?

17 Q. If you know.

18 A. I believe it was Robin Zawacki.

19 Q. And do you know when the most recent
20 profit and loss statement you had seen for the
21 Davis-Besse plant is?

22 A. It would have been the same time frame.

23 Q. Okay. And those statements, are they
24 just for a single month, or are they for a longer
25 period of time?

1 A. They're for the month as well as year to
2 date.

3 Q. Is there any forward-looking analysis in
4 that profit and loss statement?

5 A. I don't believe so.

6 Q. And do you receive these on a monthly
7 basis?

8 A. Approximately monthly.

9 Q. And have you seen any forward-looking
10 profit and loss statements regarding the Sammis
11 plant?

12 A. I have as part of the information for
13 this proceeding.

14 Q. And when is the most recent
15 forward-looking profit and loss statement you've seen
16 for the Sammis plant?

17 A. I believe it was what was submitted by
18 Mr. Lisowski.

19 Q. In this proceeding?

20 A. Yes. It was the forward forecasts as
21 part of this proceeding. That would be the only
22 forward-looking profit or loss that I've seen for
23 Sammis.

24 Q. Okay. And is it the same for
25 Davis-Besse?

1 A. Yes.

2 Q. And outside of any profit and loss
3 statements, you've not seen any analysis showing that
4 Sammis or Davis-Besse would be retired if the
5 proposed transaction were rejected; is that correct?

6 A. That's correct.

7 Q. And no one has told you that Sammis or
8 Davis-Besse would be retired if the proposed
9 transaction were rejected, correct?

10 MR. LANG: Objection. Your Honor,
11 perhaps it's just a point of clarification. The
12 proposed transaction, you're referring to rider RRS?

13 MR. FISK: I believe we established
14 earlier the post transaction is the proposal for FES
15 to sell energy, capacity, and ancillary services to
16 the companies.

17 MR. LANG: To that extent, your Honor, I
18 would object. It's mischaracterizing the proposal
19 before the Commission. It's certainly been discussed
20 in the last several weeks that the proposed
21 transaction, the term sheet part of this, is not here
22 for approval but --

23 EXAMINER ADDISON: Thank you. Do you
24 care to rephrase, Mr. Fisk?

25 MR. FISK: Certainly.

1 EXAMINER ADDISON: Thank you.

2 Q. (By Mr. Fisk) Am I correct that no one
3 has told you that Sammis or Davis-Besse would be
4 retired if the proposed transaction were not entered
5 into?

6 A. That's correct.

7 Q. And you do not recall any discussions as
8 to whether Sammis or Davis-Besse would be retired if
9 the proposed transaction were not entered into; is
10 that correct?

11 A. That's correct.

12 Q. But you would likely be asked to provide
13 an opinion regarding whether to retire one of those
14 plants; is that correct?

15 A. Yes, I expect that I would be asked for
16 an opinion on such matters.

17 Q. And you've never been asked to provide
18 such an opinion to date; is that right?

19 A. Not that I remember.

20 Q. If Davis-Besse were to be retired, it
21 would need to be decommissioned, correct?

22 A. Eventually, yes.

23 Q. Okay. And such decommissioning is a
24 requirement of Nuclear Regulatory Commission
25 regulations; is that right?

1 A. Yes.

2 Q. And, to your knowledge, is the owner of
3 Davis-Besse responsible for paying for such
4 decommissioning costs?

5 A. Yes.

6 Q. And current estimated costs of
7 decommissioning Davis-Besse is approximately
8 1.2 billion; is that right?

9 A. That doesn't match what I can remember
10 from memory. There's a formula that the Nuclear
11 Regulatory Commission requires us to use, but it's
12 the net present value, not the eventual costs. So
13 the net present value in the last report that I
14 remembered seeing submitted, which was the most
15 recent report here within the last year, I believe
16 the net present value of the required decommissioning
17 funds was approximately 500 million, and I've not
18 done the math in my head to project what that
19 translates to out in the future to answer whether it
20 matches the 1.2 that you mentioned.

21 Q. So the decommissioning, is that something
22 that would occur over a number of years?

23 A. It would probably be helpful to explain
24 the methodology for decommissioning we've chosen for
25 Davis-Besse, and it's an approach called safe store

1 where it is upon cessation of the operating license,
2 initial activities would be conducted to remove the
3 nuclear fuel from the reactor core and put it into
4 storage and then there would be little activity at
5 the site for somewhere between a 20- and 30-year
6 period of time and the basis for that is to allow all
7 the radioactive components to decay which lessens the
8 disposal costs as well as improves the safety to the
9 workers who would actually be doing the
10 decommissioning activities.

11 EXAMINER PRICE: So you would remove the
12 fuel and it would sit for 20 to 30 years?

13 THE WITNESS: Under the safe store
14 methodology, yes. That would be what I would expect
15 that many companies would do upon de -- or upon
16 stopping the operating license, stopping operation of
17 the nuclear plant.

18 EXAMINER PRICE: And you would maintain
19 site security obviously for that 20- to 30-year time
20 period.

21 THE WITNESS: Yes. There is security
22 requirements. The security requirements for a plant
23 that's in a defueled status as well as the emergency
24 plan requirements, things can be relaxed to some
25 extent, but there is still a requirement to have

1 such --

2 EXAMINER PRICE: And are those ongoing
3 costs then built into the decommissioning costs?

4 THE WITNESS: At least some portion of
5 them. I can't say 100 percent, but at least some
6 portion of that is built into the cost for the
7 decommissioning. Processwise, upon notifying the
8 Nuclear Regulatory Commission that you're going to
9 cease the operating license, they require within two
10 years you submit something called a post
11 decommissioning shutdown activities report, and as
12 part of that report, you submit it for basically what
13 activities you're going to conduct under the
14 decommissioning fund.

15 Q. (By Mr. Fisk) So you referred to an
16 approximately \$500 million figure as net present
17 value, correct?

18 A. That is correct.

19 Q. And is it calculated that way because
20 there are significant decommissioning costs that
21 would happen a number of years in the future?

22 A. Well, I can't speak to the basis of the
23 regulation that requires us to do that, but I believe
24 the Nuclear Regulatory Commission asks us to put it
25 in net present value terms using a very specific

1 formula because it gets compared to the actual
2 decommissioned fund dollars available to see whether
3 there's an underfund or a surplus. If there's an
4 underfund, then the owner is required in some cases
5 to resolve that underfund. So, I believe that's why
6 the regulation has you report it in net present value
7 terms.

8 Q. Okay. So I'm clear, so if the plant --
9 if Davis-Besse were to retire, it would be an expense
10 to put it into safe store I believe you said; is that
11 correct?

12 A. There would be some level of expense to
13 put it in safe store, but I would not expect it to be
14 significant.

15 Q. Okay. And then it would stay in safe
16 store for 20 or 30 years, correct?

17 A. Yes.

18 Q. Okay. And then at the end of that time
19 period, that's when the actual decommissioning would
20 occur; is that right?

21 A. Yes.

22 Q. Okay. So it's at that point that there
23 would be significant decommissioning expenses?

24 A. Yes.

25 Q. Okay.

1 EXAMINER PRICE: You're probably going to
2 get to this point, so if I'm interrupting, I'm sorry.

3 MR. FISK: Go ahead.

4 EXAMINER PRICE: You indicated there's a
5 decommissioning fund; is that correct?

6 THE WITNESS: Yes.

7 EXAMINER PRICE: So your decommissioning
8 costs have been pre-paid basically?

9 THE WITNESS: Basically, that's the
10 philosophy of the regulatory requirements for
11 decommissioning fund is that you create the fund and
12 fund it to an adequate level while the plant is
13 operating, and you have revenue so that once you stop
14 the operation, the Nuclear Regulatory Commission
15 would have assurance that you're going to have
16 adequate funding to eventually conduct the activities
17 of the decommissioning.

18 EXAMINER PRICE: And that fund has to be
19 some percentage of the net present value of the cost
20 of decommissioning?

21 THE WITNESS: Yes. I don't remember the
22 exact percentages, but if you're below --

23 EXAMINER PRICE: I wasn't asking that.

24 THE WITNESS: If you're below a certain
25 percentage, you actually have to contribute

1 additional dollars to that fund to restore it.

2 EXAMINER PRICE: Thank you.

3 MR. FISK: Thank you, your Honor.

4 Q. (By Mr. Fisk) Okay. And the payments
5 into that decommissioning trust, if you understand,
6 are those referred to as accretion expenses?

7 A. I don't believe so. There are no
8 payments into the decommissioning fund for
9 Davis-Besse right now. It is fully funded as
10 indicated in the last filing with the Nuclear
11 Regulatory Commission. Accretion expense is
12 basically -- it's a way of amortizing an expense over
13 the life of an asset similar to depreciation. And if
14 you wanted to go any deeper than that, you would have
15 to ask Mr. Lisowski.

16 Q. Okay. Fair enough.

17 MR. FISK: Your Honor, may we approach?

18 EXAMINER ADDISON: You may.

19 MR. FISK: If we could have this marked
20 as Sierra Club Exhibit 47.

21 EXAMINER ADDISON: So marked.

22 MR. FISK: Thank you.

23 (EXHIBIT MARKED FOR IDENTIFICATION.)

24 MR. LANG: What is the number for this
25 one?

1 MR. FISK: Sierra Club 47.

2 MR. LANG: Thank you.

3 Q. (By Mr. Fisk) Mr. Harden, you've been
4 handed Sierra Club 47 which is the response to OCC
5 Set 10-INT-219; is that correct?

6 A. Yes.

7 Q. And you are identified as the witness on
8 this response; is that correct?

9 A. Yes.

10 Q. And the request says "What is the
11 estimated cost to decommission Davis-Besse in the
12 event the plant was to permanently close"; is that
13 correct?

14 A. Yes.

15 Q. And then the response after the
16 objections identifies the minimum decommissioning
17 fund estimate is 497 million, approximately; is that
18 correct?

19 A. Yes.

20 Q. So is the \$497 million figure, is that
21 what's in the fund or is that estimated cost of
22 decommissioning?

23 A. The 497 million is the estimate in a net
24 present value term using the formula required by the
25 Nuclear Regulatory Commission to perform your

1 estimates.

2 Q. The estimate of the cost?

3 A. The estimate of the cost.

4 Q. Okay. And do you know that amount is
5 also in the decommissioning trust fund?

6 A. Greater than that amount was in the
7 decommissioning trust fund the last time we reported
8 it to the Nuclear Regulatory Commission.

9 Q. Okay. If you could turn to your
10 testimony at page 12. Starting up at line 1, you
11 have a discussion about the current status of CSAPR.
12 Do you see that?

13 A. Yes, I do.

14 Q. And that stands for the Cross-State Air
15 Pollution Rule; is that right?

16 A. Yes.

17 Q. And would you agree that's often
18 pronounce as CSAPR?

19 A. Yes.

20 Q. Okay. And you note that CSAPR requires
21 further reductions in SO-2 and NOx; is that right?

22 A. In general terms, that's correct.

23 Q. And it's your testimony that no
24 additional pollution controls will be needed on
25 Sammis in order to achieve compliance with CSAPR; is

1 that right?

2 A. That is right, I do not believe that
3 Sammis will require any more emission controls to
4 comply.

5 Q. Okay. And the basis for that opinion is
6 modeling done by Ohio EPA; is that right?

7 A. Yes. The way CSAPR is implemented, the
8 EPA leaves it to the states. The states have
9 requirements they have to meet and within each state,
10 they determine -- they basically provide allowances
11 and each plant either has to operate within those
12 allowances or purchase additional allowances.

13 Q. And you have not personally seen the
14 modeling done by Ohio EPA, correct?

15 A. That's correct.

16 Q. And you instead are relying on a briefing
17 with Mr. Jurousek regarding such modeling; is that
18 correct?

19 A. Not entirely.

20 MR. FISK: May we approach?

21 EXAMINER PRICE: You may.

22 MR. FISK: I'm handing out a copy of
23 Mr. Harden's January 16, 2015, deposition transcript,
24 the public session.

25 Q. And if you could turn to page 104,

1 starting on line 16, the "Question: And what is your
2 basis for believing that no additional emission
3 controls will be required for compliance with CSAPR
4 at Sammis?

5 "Answer: Because modeling done to date
6 by the state would not indicate Sammis is a
7 contributor to nonattainment areas.

8 "Question: And what modeling are you
9 referring to?

10 "Answer: I've not seen the modeling
11 personally. I am referring to what Mr. Jurusik
12 briefed me on.

13 "Question: Okay. So Mr. Jurusik told
14 you the state has done some modeling, and on that
15 basis it's his opinion that nothing further will be
16 needed at Sammis; is that right?

17 "Answer: That is correct." Did I read
18 that correctly?

19 A. Yes.

20 Q. And Mr. Jurousek is not a witness in this
21 proceeding, correct?

22 MR. LANG: Your Honor, could I just -- in
23 terms of taking him to this deposition -- I'm sorry.
24 I may have missed it. You established when the
25 deposition was taken, right?

1 MR. FISK: Yeah.

2 MR. LANG: I just -- I just wanted to
3 make sure we were on the right one.

4 MR. FISK: Okay.

5 MR. LANG: Sorry to interrupt.

6 Q. (By Mr. Fisk) Mr. Jurousek is not a
7 witness in this proceeding, correct?

8 A. That's correct.

9 Q. And the Ohio EPA modeling that you
10 referred to has not been produced to the parties in
11 this proceeding; is that right?

12 A. Not that I'm aware of.

13 Q. Okay. And you have never directly
14 evaluated whether selective catalytic reduction
15 controls would be needed to be installed on any of
16 Sammis units 1 through 5, correct?

17 A. That's a forward-looking question. Under
18 what scenario are you asking it? You're asking me
19 whether I've ever evaluated whether they would be
20 needed? Whether they would be needed under what
21 scenario?

22 Q. Just have they ever evaluated that
23 issue -- have you ever evaluated whether there's any
24 scenarios in which SCRs would need to be installed in
25 any of Sammis units 1 through 5?

1 A. What I've looked at is what Sammis is in
2 compliance with today and the consent decree
3 limitations that we comply with today and submit
4 regular reports and what the limitations of those
5 consent decree requirements are compared to all of
6 the other existing regulations which it's much more
7 stringent. And I've also looked at whether or not we
8 are currently purchasing allowances.

9 Q. If you could turn to page 109 of your
10 deposition transcript starting to line 6, the
11 "Question: Okay. And have you ever directly
12 evaluated whether SCRs would need to be installed on
13 Sammis units 1 through 5?

14 "Answer: No.

15 "Question: Okay. And is that true not
16 just under CSAPR but under any other environmental
17 regulatory program?

18 "Answer: Is what true?

19 "Question: That you have never evaluated
20 whether an SCR would be needed to units 1 through 5?

21 "Answer: No. I have not."

22 Did I read that correctly?

23 A. You did.

24 MR. FISK: Okay. Thank you. I have
25 nothing further for the public session.

1 EXAMINER ADDISON: Thank you, Mr. Fisk.
2 Mr. Oliker.

3 MR. OLIKER: Thank you.

4 - - -

5 CROSS-EXAMINATION

6 By Mr. Oliker:

7 Q. Good morning, Mr. Harden. I apologize
8 for jumping around here, but I want to talk about a
9 few of the environmental components you discuss in
10 your testimony. Regarding -- could you describe the
11 purpose of the flue gas desulfurization?

12 A. In a nutshell, the purpose is to reduce
13 SO-2 emissions.

14 Q. And is that done through a process of
15 spraying limestone on the coal?

16 A. Yes. It's the wet scrubber process uses
17 a spray with limestone that reacts with the SO-2 in
18 the flue gas.

19 Q. And that process has a parasitic load to
20 it, correct?

21 A. To make sure I understand, can you
22 explain what you mean by parasitic load?

23 Q. Are you familiar with the term, Mr.
24 Harden?

25 A. I'm familiar with my interpretation of

1 parasitic load. I want to make sure I answer your
2 question.

3 Q. First, let's start with what is your
4 understanding of the term parasitic load.

5 A. My understanding of parasitic load would
6 be -- another terminology I use is house loads, the
7 loads to operate the equipment at the station.

8 Q. Okay. So that flue gas desulfurization
9 equipment requires energy to run, correct?

10 A. Yes.

11 Q. And that's provided from the Sammis plant
12 itself, correct?

13 A. Yes.

14 Q. So that reduces the output of the plant,
15 correct?

16 A. It reduces the output of the plant over
17 what it otherwise would have been without such
18 equipment.

19 Q. Okay. Thank you. I'm glad I got you to
20 explain this.

21 Okay. And could you -- you can let me
22 know if this is proprietary, but what type of
23 limestone process does the Sammis plant use?

24 A. Could you rephrase the question?

25 Q. Are there different types of the

1 limestone process for desulfurization that can be
2 used?

3 A. In general terms, I would say there's dry
4 scrubber process and there's wet scrubber process.
5 Sammis uses a wet scrubber process.

6 Q. And the wet scrub process is more energy
7 intensive, correct?

8 A. I can't say that I've looked at that to
9 note a difference between the two.

10 Q. Could you identify the -- what percentage
11 of the total output of Sammis is reduced by the flue
12 gas desulfurization process, if you know?

13 A. I don't know specific to the WFGD system.

14 Q. Is it somewhere in the range of 3 to
15 4 percent?

16 A. 3 to 4 percent would be a typical figure.
17 I don't know specifically to Sammis.

18 Q. Okay. And looking at -- there are
19 additional environmental controls installed at the
20 Sammis plant like selective catalytic reduction,
21 correct?

22 A. Yes.

23 Q. And is there a parasitic load to that
24 equipment?

25 A. Yes. All operating equipment has some

1 amount of what I'm referring to as parasitic load,
2 some amount of energy that it requires from the
3 plant.

4 Q. And what percentage of the total output
5 is reduced by the selective catalytic reduction,
6 understanding that this is only applied to a few of
7 the units?

8 A. Specific to the SCRs, I do not know what
9 percentage that is.

10 Q. And if you know, is it -- do you know if
11 it's 1 percent greater? Smaller?

12 A. For SCRs, I do not know.

13 Q. And could you identify -- what other
14 environmental control technology has parasitic load
15 at the Sammis plant? For example, does the
16 particulate collection systems baghouse have
17 parasitic load?

18 A. I guess you're asking a question that is
19 a little broader than giving a specific answer
20 because there are fans as part of the flue gas system
21 that consume some amount of electricity and so those
22 fans do direct the flue gas through the electrostatic
23 precipitators. Some of that equipment was installed
24 specifically for the environmental controls. Some of
25 it would be existing whether you installed

1 environmental controls or not.

2 Q. Now, besides the environmental control
3 technology benefit discussed so far, are there any
4 additional technologies that would have parasitic
5 load at the Sammis plant?

6 A. Power plant by definition of having
7 running equipment in it has quite a bit of parasitic
8 load. Each plant is slightly different based upon
9 its design and the amount of operating equipment it
10 has, but all your motors, your, you know, fans, all
11 of those components within the confines of the power
12 plant that are a necessary part of the power plant do
13 consume some amount of load and, therefore, are
14 considered parasitic load.

15 Q. Okay. And you also talk about the water
16 cooling system that Sammis uses in your testimony,
17 correct?

18 A. Yes.

19 Q. And the Sammis plant is located on a
20 river, and that's the source of that cooling system,
21 correct?

22 A. Yes.

23 Q. And the cooling system can become less
24 effective if the water that flows through it is
25 warmer than normal, correct?

1 A. Yes. At higher temperatures, it's less
2 efficient at cooling.

3 Q. And if the level of the river were to
4 decrease in, for example, a drought, then the
5 effectiveness of the cooling system would decrease,
6 correct?

7 A. Not necessarily. That's much more
8 complicated on the Ohio River because you have a set
9 of dams and pools and it all depends on how much
10 water is allowed to flow between the dam and pools,
11 not on just absolute level of one of the pools
12 between the dams.

13 Q. Have there been times when the operation
14 of the dams and pools has decreased the effectiveness
15 of the cooling system at Sammis?

16 A. I would say that there are times of the
17 year when the cooling effectiveness is decreased. I
18 don't know that I can definitively state whether it's
19 just due to ambient temperatures or due to operation
20 of the pools. My point is that's a dynamic system on
21 the river there, so it's not just one parameter that
22 controls it.

23 Q. And can the effectiveness of the cooling
24 system be decreased in the wintertime if the river
25 freezes?

1 A. Typically no. The river doesn't freeze
2 solid. The river only freezes on the surface. The
3 Sammis plant doesn't have any issues with intake
4 water or discharge of water due to freezing.
5 Actually, the discharge in the pool where the intake
6 is actually helps prevent freezing in that pool, but
7 the wintertime typically sees higher efficiency
8 cooling, lower temperature cooling than other times
9 of the year.

10 Q. Is there a reason why you use the word
11 typically? Is there a set of circumstances where
12 that is not the case?

13 A. There's never been a circumstance in the
14 history of Sammis that I'm aware of where that's not
15 been the case.

16 Q. Coming back to the summertime, it's
17 possible that because of the effectiveness of the
18 cooling system, the output of the plant can decrease
19 at times, correct?

20 A. Yes. All power plants that rely upon
21 cooling water will have a decreased deficiency during
22 a summertime if the temperature of the cooling water
23 increases beyond a certain threshold.

24 Q. Okay. And some of the various things --
25 some of these efficiency issues that we've been

1 discussing, that's part of the reason why you have a
2 listed installed capacity value in your testimony of
3 2,130, correct?

4 A. No, I wouldn't say that. The PJM defines
5 how you determine ICAP and what you submit in ICAP.
6 It's basically to simplify since I don't have all the
7 PJM manual rules memorized, it's a summertime
8 measured value, and it's a summertime measured value
9 for reasons that PJM needs to know what is the
10 generation going to be on those summer days, not what
11 is the peak going to be on the most efficient cooling
12 water day.

13 So the ICAP values are tested, measured
14 values that we submit and what was in my testimony
15 was a snap point in time. I believe it was August
16 2014, that was the time my testimony was being put
17 together, that I had the ICAP value pulled from PJM
18 GADS. That's a system that PJM uses for all of our
19 reporting.

20 Q. Does it also use ERPM?

21 A. Yes. I'm not as familiar with ERPM, but
22 I know what it is.

23 EXAMINER PRICE: Can I ask a follow up?
24 Having said all that, the parasitic load and the
25 variations in efficiency based on the temperature of

1 the cooling water, that all is built into that ICAP
2 figure?

3 THE WITNESS: Yes, because it's a
4 measured value. You do a summertime measurement. I
5 believe there are more caveats in the PJM manual on
6 alternatives you can do. But for our plants, we
7 typically to a summertime measurement, and that's
8 what we submit.

9 EXAMINER PRICE: And I gather from what
10 you're saying, that ICAP value can vary from year to
11 year?

12 THE WITNESS: That ICAP value can vary
13 year to year based upon measurement. It also
14 varies -- particularly for a coal plant, a lot of
15 other things can vary it as well. You can be running
16 at what would be a derate from your nominal just due
17 to fuel blends. You can have efficiency losses in
18 the plant just due to equipment that's nearing
19 needing maintenance that's causing efficiency loss.
20 So it can fluctuate and vary quite a bit.

21 EXAMINER PRICE: Quite a bit? So there
22 will be a range -- what's quite a bit to you? 100?

23 THE WITNESS: I've seen variations of
24 around 100. You know, mostly a large portion of
25 that, or at least the largest I remember seeing is

1 oftentimes driven by fuel blends.

2 EXAMINER PRICE: The type of coal you put
3 in?

4 THE WITNESS: Yes.

5 EXAMINER PRICE: Thank you, Mr. Olikar.

6 Q. (By Mr. Olikar) And that's part of the
7 reason why ICAP is usually referred to as the net
8 summer dependable rating of a unit?

9 A. Yes.

10 Q. And if we were to look on ERPM today,
11 would you agree that the ICAP level for Sammis would
12 be 2,130?

13 A. I don't know. I don't know what we did
14 for a measurement this last summer and what fuel
15 blend we were using from memory.

16 Q. Would you agree that whatever number is
17 listed on ERPM is the correct number if it included a
18 date of September 2nd or 1st?

19 A. I would agree that what we have submitted
20 and put in the system is correct.

21 MR. OLICKER: Your Honor, can we take
22 administrative notice of that number on PJM's
23 website?

24 EXAMINER PRICE: Well, I don't know.
25 Let's see what Mr. Lang says. Can we take

1 administrative notice of the number on the PJM
2 website?

3 MR. LANG: Your Honor, I don't know if
4 that's something you can take administrative notice
5 of.

6 EXAMINER PRICE: Well, let's keep in mind
7 the rules of evidence are fairly lax. But it does
8 seem like it is --

9 MR. LANG: I've heard that before in this
10 proceeding.

11 EXAMINER PRICE: Selectively, actually.
12 It is something that is a reliable
13 source, and it is something that's easily referenced.

14 MR. OLKER: The other way we can do this
15 I could ask him if he could accept, subject to check,
16 that the number is 2,130, and he can go look at it.

17 EXAMINER PRICE: You know, I hate subject
18 to check because we don't hold a subsequent hearing
19 where we go back over a month later did everybody
20 check everything.

21 MR. LANG: And I agree with the subject
22 to check, your Honor. I mean, I think the -- I know
23 that what's in Mr. Harden's testimony for the time
24 period in 2014 is correct for the time period in
25 2014. Mr. Harden has testified that he doesn't know

1 what the 2015 number would be. He's testified that
2 whatever FES had submitted would be accurate.

3 You know, I just don't know enough about
4 what's reported -- he's asking you to take
5 administrative notice of whether it's 100 percent
6 reliable and accurate, which was kind of my initial
7 issue of in order to take administrative notice of
8 something, you take administrative notice of a record
9 that is, you know, undeniably accurate. So that's my
10 struggle is with what Mr. Olikier is asking is, you
11 know, I know we have testimony what FES has submitted
12 is accurate. I just don't know if what is on this
13 website that Mr. Olikier is looking at on his computer
14 is also accurate.

15 EXAMINER PRICE: Well, let's put it this
16 way, I will take administrative notice of the figure,
17 but we will note for the record that Mr. Olikier has
18 opened the door on redirect so that if you want to
19 follow up on redirect, there's not going to be any
20 accepted objections of we weren't told this in
21 discovery because he's opening the door.

22 MR. LANG: Is there --

23 EXAMINER PRICE: It would be nice if he
24 told us the figure, though, for the record.

25 MR. LANG: And I think also a -- I don't

1 know if it does on this record, but if the figure
2 ties to a date.

3 EXAMINER PRICE: Mr. Olikar can add them
4 up and then read into the record each individual one.

5 MR. OLIKER: I would represent the number
6 is 2,130 and then there are an additional 13
7 megawatts of diesel generation.

8 EXAMINER PRICE: Can you give the unit
9 ICAPs?

10 MR. OLIKER: The unit ICAPs for Sammis 1
11 is 160; Sammis 2, 160, Sammis 3, 160; Sammis 4, 160;
12 Sammis 5, 290; Sammis 6, 600; Sammis 7, 600, then
13 13 megawatts of diesel.

14 EXAMINER PRICE: We can take
15 administrative notice of all those figures. To go
16 through the process just to turn out that your number
17 has not changed.

18 MR. OLIKER: That's the point.

19 Q. (By Mr. Olikar) Moving on from -- you
20 agree that the unforced capacity level is the
21 installed capacity level reduced for forced outages
22 and derates.

23 A. Yes.

24 Q. Okay. And with respect to Mr. Lisowski's
25 projections, you did not provide to him unforced

1 capacity levels; you provided forced outage levels.

2 A. Yes, that's correct.

3 Q. And when I say you, I'm referring to your
4 staff, correct?

5 A. Yes, but I also reviewed those values and
6 agreed with them before they were given to
7 Mr. Lisowski.

8 Q. Okay. And when those -- you say those
9 values, you're referring to the forced outage rates?

10 A. Yes, EFOR.

11 Q. Yes. And you didn't review
12 Mr. Lisowski's workpapers to determine if they were
13 accurate, correct?

14 A. That's correct.

15 Q. Okay. And the forced outage rate you
16 provided to Mr. Lisowski, is that the (REDACTED)
17 number?

18 MR. OLIKER: I'm sorry. Could you strike
19 that from the public record, please?

20 MR. LANG: Your Honors, could we strike
21 that from the public record? I believe Mr. Oliker
22 might want to return to that in the confidential
23 portion.

24 EXAMINER ADDISON: Let's strike that in
25 the record.

1 MR. OLIKER: And in the words of
2 Mr. Price, physically strike it.

3 If I could have one moment.

4 EXAMINER ADDISON: You may.

5 THE WITNESS: Your Honor, would this be a
6 good opportunity for a break?

7 MR. OLIKER: That would be fine. That
8 would give me an opportunity to look over my notes.

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

11 (Recess taken.)

12 EXAMINER ADDISON: Let's go back on the
13 record.

14 Mr. Oliker, did you have any other
15 questions?

16 MR. OLIKER: Thank you, your Honor. I
17 have no more questions.

18 Thank you, Mr. Harden.

19 MR. HAYS: I wanted to say I don't have
20 any questions.

21 EXAMINER ADDISON: Thank you, Mr. Hays.

22 MR. HAYS: I will say the Bench has been
23 very polite when people have had to leave for a
24 period to do that, so I appreciate that.

25 EXAMINER ADDISON: Any time. Thank you.

1 Ms. Fleisher.

2 MS. FLEISHER: Sure.

3 - - -

4 CROSS-EXAMINATION

5 By Ms. Fleisher:

6 Q. Mr. Harden, would you say you're familiar
7 with the environmental permits for the Sammis plant?

8 A. Yes.

9 Q. Have you maybe seen them on occasion?

10 A. Yes.

11 MS. FLEISHER: May I approach, your
12 Honor?

13 EXAMINER ADDISON: You may.

14 MS. FLEISHER: May I mark this as ELPC
15 12?

16 EXAMINER ADDISON: So marked.

17 (EXHIBIT MARKED FOR IDENTIFICATION.)

18 Q. (By Ms. Fleisher) Mr. Harden, does this
19 generally look to you like a copy of Sammis'
20 currently effective clean water permit?

21 A. Yes, what's commonly preferred to as our
22 NPDES.

23 Q. And can you turn to page 7 of the permit?

24 A. Okay.

25 Q. And do you agree this is a page labeled

1 "Final Effluent Limitations and Monitoring
2 Requirements" for Outfall 009? Did I read that
3 correctly?

4 A. Yes.

5 Q. And do you see there's a row for mercury
6 and would you agree that that contains a monthly
7 discharge limitation of 12 micrograms per liter daily
8 of .0625 kilograms per day and monthly limit of
9 .00441 kilograms per day?

10 A. Yes.

11 Q. And just looking at the top of the page,
12 would you agree that it says that "During the period
13 beginning 36 months after the effective date of this
14 NPDES permit and lasting until the expiration date,
15 the permittee is authorized to discharge in
16 accordance with the following limitations and
17 monitoring requirements"?

18 A. Yes.

19 Q. And do you know whether Sammis is
20 currently in compliance with these limits?

21 A. What I know is Sammis operates in
22 compliance with these limits or has to report any
23 exceedences.

24 Q. I guess I may have skipped a step there.
25 Do you recognize that these limits don't go into

1 effect until 36 months after the effective date of
2 the permit?

3 A. Yes.

4 Q. So you'd agree that they're not currently
5 effective?

6 A. Yes.

7 Q. I was wondering if you know even though
8 these limits aren't currently effective, whether
9 Sammis is within these limits.

10 A. From memory, I can't speak to that.

11 Q. And can you turn to page 25?

12 A. Yes.

13 Q. And can you look at section B on this
14 page "Schedule to Meet Final Effluent Limitations for
15 Mercury at Outfall" -- I'm just going to say outfall
16 009 for shorthand, and would you agree it says, "The
17 permittee shall attain compliance with the final
18 effluent limits for mercury at outfall 009 as soon as
19 possible."

20 A. Yes.

21 Q. And would you agree -- I will not read
22 them into the record, but it then goes on to list a
23 schedule of steps that the permittee is required to
24 take to attain compliance?

25 A. Yes.

1 Q. And do you know -- I guess, so do you
2 agree that one of those steps is to submit a plan of
3 action for meeting the final effluent limits?

4 A. Yes.

5 Q. And do you know whether FES has prepared
6 such a plan for Sammis?

7 A. No, I do not.

8 Q. And in the course of projecting
9 environment compliance costs for Sammis, did you
10 account for the possibility or for potential costs
11 related to implementation of such a plan of action?

12 A. For the cost projections of the plant, we
13 included all typical costs that would be incurred for
14 complying with ongoing regulations. I can't speak
15 specifically to this plan because I don't remember
16 specific -- you know, looking at that plan, but there
17 are included in the forward projection cost figures,
18 there are costs to comply with just ongoing
19 regulatory requirements as the station has always had
20 to do.

21 Q. Okay. And can you turn back to page 6 of
22 ELPC 12?

23 A. Yes.

24 Q. And would you agree this says "Interim
25 Effluent Limitations and Monitoring Requirements,"

1 and it indicates it's for outfall 009?

2 A. Yes.

3 Q. And is it correct that there is no
4 interim effluent limitation for mercury discharges
5 from outfall 009?

6 THE WITNESS: Could you read back the
7 question.

8 (Record read.)

9 A. Yes.

10 Q. So to the best of your knowledge, would
11 compliance with the mercury discharge limitation have
12 been part of your consideration of the cost of
13 compliance with ongoing environmental regulations?

14 A. Yes. That would be considered just part
15 of ongoing limitations that the plant is required to
16 meet, that do incur some investment or some cost for
17 meeting on a regular basis.

18 Q. Do you know what control Sammis currently
19 has for mercury treatment?

20 A. Are you specifically referring to water
21 discharge or air effluent discharge?

22 Q. I'm sorry. I'm referring to water
23 discharges, treating of waste water.

24 A. I don't know that I can speak to all
25 inclusive, but some of the controls include settling

1 ponds that are used in their monitoring wells that as
2 part of the NPDES requirements are required to be
3 monitored.

4 Q. And do you know whether those existing
5 settling ponds achieve compliance with the final
6 discharge limitation for mercury that's contained in
7 this permit?

8 A. I only know they're in compliance with
9 the current. I don't know current values from memory
10 to speak to this document you've put in front of me.

11 Q. And just to confirm, to the best of your
12 recollection, you never discussed during the process
13 of -- you never discussed specifically the issue of
14 mercury discharges to water during the process of
15 projecting environmental compliance costs.

16 A. We discussed all the existing approved
17 requirements that the plant is going to have to meet
18 in general terms, but not mercury and water
19 specifically.

20 EXAMINER PRICE: Do you have a sense of
21 the order of magnitude of costs that we're talking
22 about here? I mean, your one investment was
23 \$1.8 billion. I'm assuming this is not a
24 \$1.8 billion investment, but do you have a sense of
25 what this would roughly be?

1 THE WITNESS: Yes. The water
2 requirements typically are immaterial to the overall
3 expenditure at the site. You know, looking back at
4 history of the plant, we've been required to meet
5 continuously more stringent requirements. Of course,
6 the air quality was a significant investment. That
7 required significantly improved technology. The
8 water requirements historically have not been a
9 material cost in the overall budget or cost for the
10 site, and nor do we believe they will be a material
11 cost relative to the overall forecasted cost to the
12 site.

13 EXAMINER PRICE: Thank you.

14 Q. (By Ms. Fleisher) I guess I'd like to
15 follow up and dig into that. Do you have any
16 specific knowledge about the cost of treating mercury
17 in wastewater discharges?

18 A. No, I do not.

19 Q. And to date, would you agree that Sammis
20 has not had to meet any discharge limit for this
21 outfall for discharge of mercury?

22 A. I would have to look at the current
23 permit to answer that question. I do not know from
24 memory.

25 Q. Given that we just went through the

1 current permit for this outfall and there are no
2 interim limitations for mercury, would you agree that
3 there are no currently applicable limitations at this
4 outfall?

5 A. No. Without looking at the permits that
6 were in place prior to this, no, I cannot answer that
7 question.

8 Q. Are you familiar with the antidegradation
9 provisions of the Clean Water Act?

10 A. Generally.

11 Q. Are you familiar that they -- and I'm
12 going to summarize here, but you can disagree if you
13 want, that they prohibit permits that's more lenient
14 than the last permit?

15 A. Generally.

16 Q. So would you expect that if this permit
17 doesn't have a currently effective mercury limit that
18 a prior permit would?

19 A. The only reason I can't answer that from
20 memory is our NPDES requirements are voluminous.
21 They're many and I can't speak to those from memory.

22 Q. And outside of the context of purchasing
23 the cost projections for this case, have you ever
24 discussed mercury discharge treatment for the Sammis
25 plant with anyone?

1 A. Not in water.

2 Q. And before you were discussing with
3 Ms. Hussey that you didn't know or you weren't
4 present for the point when FES decided to install the
5 \$1.8 billion of air quality controls at Sammis,
6 correct?

7 A. Yes.

8 Q. And I'm just wondering if generally
9 you're familiar with what the decision process would
10 be for FES in deciding to make such a major capital
11 investment at a plant.

12 A. If you're asking do I know in general
13 terms how we go about making capital decisions
14 currently, I do.

15 Q. Yes, that's the version of the question I
16 would like you to answer. Can you describe that
17 process?

18 A. Can you be more specific as to what
19 aspect of the process you are interested in?

20 Q. Sure. I'm interested in how you would
21 decide whether you want to move forward with the
22 investment in the plant, whether it's worth the cost.

23 A. It takes into account many things. It
24 takes into account whether there's a payback from a
25 plant improvement perspective. It takes into account

1 whether there's a cost avoidance from an equipment
2 reliability perspective. It takes into account
3 regulatory and environmental requirements. It takes
4 into account many factors that are day-to-day factors
5 that we have to deal with in operating our plants.

6 Q. And would the payback period be a
7 prominent aspect of the decision-making?

8 A. Not necessarily. If it was strictly a
9 cost benefit improvement such as an improvement that
10 would increase the megawatt electric output of the
11 plant, that would simply be economics, cost benefit.
12 Most other decisions, most other types of investments
13 have more than one factor that go into the
14 decision-making.

15 Q. And what about for air quality controls,
16 have you been involved in any capital investment
17 decision-making regarding installation of air market
18 controls?

19 A. Only for maintaining existing systems,
20 not for a new project such as the AQC that was done
21 at Sammis.

22 Q. Okay. So those would be more minor cost
23 items; is that right?

24 A. I don't know that I would call them minor
25 based upon the dollar value, but they're more of a

1 maintenance as opposed to install of a new system.

2 Q. But it's still what you would consider at
3 least something of a major capital expense?

4 A. Some of them, yes.

5 Q. Okay. And so for those, what were the
6 factors that were most important to the decision
7 whether to go forward with the investment?

8 A. Mostly on maintaining, number one,
9 compliance, and number two, margin to compliance with
10 our requirements for effluents from the plants.

11 Q. Can you explain what margin to compliance
12 is?

13 A. Yes. Typically for a system such as --
14 I'll use the SCRs as an example. You don't want to
15 run -- we would not run the equipment to the point to
16 where it threatens exceeding what our consent decree
17 requires. We maintain that equipment so we can
18 operate well within that consent decree as opposed to
19 operating it right on the line where something
20 unexpected or a failure would cause an exceedance.

21 Q. Okay. To make sure I understand, so that
22 aspect, would that inform your evaluation of what the
23 costs of the project would be, or how does that come
24 into play?

25 A. I guess I'm not sure I understand your

1 question.

2 Q. We're both a little puzzled. You said
3 that margin to compliance is an aspect of the
4 decision to make the investment, and I just was
5 hoping you could connect the dots as to how that
6 works.

7 A. Sure. As I said, we try to maintain our
8 plants, all of our plants, not just Sammis,
9 Davis-Besse, all of our generating plants well within
10 the requirements, not just at requirements. And so
11 for like maintenance of a system that supports an
12 environment -- a system used to meet environmental
13 compliance, we typically would not wait to make the
14 investment until that system is right on the brink of
15 not being able to meet a requirement. We typically
16 would make those investments and make the decision to
17 make those investments much further ahead of that so
18 that we don't get to that point to where you're right
19 on the cusp of not being able to comply with the
20 requirement.

21 Q. Okay. Sorry.

22 A. I was just going to add, it's just part
23 of the philosophy for our investments to maintain our
24 plants as safe and safety includes environmental, as
25 possible.

1 Q. And would that also give you a little
2 room to breathe in terms of if the requirements get
3 more stringent down the line?

4 A. Absolutely. It would provide room for
5 that as well; although, that is not the basis for the
6 decision-making necessarily.

7 Q. And you were discussing parasitic load
8 with Mr. Oliker, and I believe you mentioned one
9 variable that affects the parasitic load of air
10 quality controls is the fuel blend; is that correct?

11 A. I have to separate. Fuel blend doesn't
12 have anything to do with parasitic loads. Fuel blend
13 affects the overall efficiency which can affect the
14 output, the electric output of the unit. Parasitic
15 loads for the most part are constant. There's some
16 variability, particularly time of year, depending on
17 how many pumps, fans, things you have running. But
18 parasitic loads are, you know, fairly constant, and
19 the parasitic loads are accounted for between the
20 difference in the gross output of a station and the
21 net output of a station, and the net output is what
22 is used in determining the ICAP, as Mr. Oliker was
23 asking earlier.

24 Q. So the fuel blend then let's say for FGD,
25 if you're using a high sulfur coal, that wouldn't

1 affect the load from the FGD system?

2 A. No, I wouldn't expect it to have any
3 measurable effect on load. It has a large effect on
4 the amount of reagents that are consumed in the
5 process but not a large effect on the load itself.

6 Q. Moving down the line, you were discussing
7 CSAPR with Mr. Fisk, correct?

8 A. I believe it was with Mr. Fisk.

9 Q. I won't hold you to that.

10 A. I believe it was Mr. Fisk.

11 Q. And I believe you discussed some EPA
12 modeling that you cited to as the basis for your
13 belief that Sammis will be able to comply with CSAPR.

14 A. Yes.

15 Q. And are you aware that CSAPR -- that EPA
16 plans to update CSAPR as the underlying ozone and PM
17 2.5 NAAQS becomes revised?

18 A. Yes.

19 Q. And did that modeling that you're
20 referring to pertain to any future version of CSAPR
21 that would rest on a more recent version of the PM
22 2.5 or ozone NAAQS?

23 A. Any recent modeling in discussion on
24 proposed rules is probably a better question for
25 Witness Evans.

1 EXAMINER PRICE: Why is that, if you
2 don't mind my asking?

3 THE WITNESS: I'm much more fluent on the
4 existing regulations and what has been done to that
5 date. There are so many proposals, not just on
6 environmental, but Nuclear Regulatory Commission. I
7 tend to focus on the near term, what's pending, what
8 has been approved but not yet implemented, those
9 types of things, from an operational and compliance.
10 I don't spend as much of my time on what may come
11 next on a day-to-day basis. So I'm just not as
12 fluent on speaking to those.

13 EXAMINER PRICE: Fair enough. Thank you.

14 Q. (By Ms. Fleisher) Are you aware that
15 there is a proposed ozone NAAQS revision that's set
16 to be finalized at the end of this month?

17 A. I know there's one set to be finalized.
18 I couldn't speak to whether it's accurate that it's
19 at the end of this month.

20 Q. Okay. That's fine. And are you aware
21 that EPA has proposed to make the ozone NAAQS more
22 stringent?

23 A. Yes, I am.

24 Q. And in the course of projecting potential
25 environmental compliance costs for Sammis, did you

1 consider or discuss with Mr. Jurousek the potential
2 effects of a revised ozone standard?

3 A. Yes, we did.

4 Q. And what was the conclusion of that
5 discussion?

6 A. Based upon existing ozone measurements in
7 the area, as well as the trend, we do not believe
8 going forward that it's going to be a concern for
9 Sammis. That said, Witness Rose did include
10 purchases of allowances in his forecast that went
11 into Mr. Lisowski's model.

12 Q. Okay. And so those allowances, am I
13 correct those would be in compliance with CSAPR to
14 the extent Sammis is contributing to downwind
15 violations of a revised ozone standard?

16 A. I would characterize those costs as
17 forecasted costs to conservatively bound anything
18 that Sammis might be required to in the future.

19 Q. Okay. And part of your analysis, did you
20 quantify the number of allowances that Sammis might
21 be required to purchase?

22 A. As I stated, today we do not believe we
23 will need to purchase additional allowances to meet
24 more stringent requirements.

25 Q. And what is that based on?

1 A. That's based upon the current trends of
2 ozone in the area over the last few years.

3 Q. Is that based on consideration of the
4 downwind effects of emissions from Sammis?

5 A. It's consideration of all the areas
6 around Sammis, upwind and downwind.

7 Q. Just to be clear, that would include
8 compliance with CSAPR under future more stringent
9 ozone regulations?

10 A. Yes. Based upon what we know today, we
11 do not believe -- and to ensure it's bounded, Witness
12 Rose did include purchases in his forecasts.

13 Q. To be clear, you believe Mr. Rose
14 included the number of allowances -- or number of
15 allowances that would need to be purchased?

16 A. What I stated was we believe we will not
17 need to purchase allowances and to bound any
18 uncertainty in that, Mr. Rose did include some
19 purchases of allowances in his forecasts.

20 Q. Okay. And that would have to include a
21 particular number of allowances, right, to arrive at
22 the costs?

23 A. I'm not familiar with how Witness Rose
24 developed his cost estimate.

25 Q. Okay. And just to confirm your

1 testimony, that consideration of the bounded range,
2 that would ensure compliance doesn't rest on any
3 modeling?

4 A. As I said, I don't know what Witness Rose
5 based his forecast on.

6 Q. Okay. But from your end, you're not
7 considering any particular modeling of the type done
8 by Ohio EPA.

9 A. That is correct. As I said, we've looked
10 at existing trends over the last few years and
11 believe we will not need to purchase allowances.

12 Q. And did you discuss this issue, and by
13 this issue, I mean compliance, with CSAPR under
14 future, not yet final NAAQS with anyone else on the
15 FES team?

16 A. When you ask with anyone else on the FES
17 team, what specifically are you referring to on the
18 FES team? Is that the team relative to the term
19 sheet development?

20 Q. Yes, correct.

21 A. Not that I remember.

22 Q. And did you discuss compliance with
23 future versions of CSAPR with anyone on the EDU team
24 that was negotiating the proposed transaction?

25 A. No, I had no discussions with the EDU

1 team and was not part of the group that did the
2 negotiations from the FES or from the EDU.

3 Q. And are you aware that EPA has proposed
4 and will soon finalize steam electric effluent
5 limitation guidelines that would be applicable to
6 Sammis?

7 A. Yes.

8 Q. And did you consider potential costs of
9 compliance with those guidelines in projecting
10 environmental compliance costs for Sammis?

11 A. Yes, we did.

12 Q. And how did you do that?

13 A. As I stated previously when discussing
14 that, the water effluent guidelines, we don't expect
15 any costs to be significant or material relative to
16 the overall forecast cost assumptions for Sammis.
17 The forward forecast cost assumptions in large part
18 were based upon looking at history of the plant, and
19 we don't expect any of the -- you're referring to the
20 ELGs, the effluent limitation guidelines. We don't
21 expect any of the ELGs to be any more material to the
22 cost of the plant than any of the previous
23 requirements we've had to meet.

24 Q. And is that based on a consideration of
25 the proposed stringency of the guidelines?

1 A. It's based in large part on what, you
2 know, our experts in the environmental arena know and
3 understand about the proposed guidelines compared to
4 what the current plant is able to meet without any
5 changes.

6 Q. And are you aware that EPA's proposal
7 contains a range of options, any of which they might
8 adopt in the final regulation?

9 A. Yes.

10 Q. And did your consideration relate to each
11 of those options or any particular one?

12 A. I really don't know any more detail on
13 the range of -- as far as what we've looked at, what
14 we haven't looked at. Ray Evans may be a better
15 witness to ask that question of.

16 Q. Sure. Did you have any role in
17 evaluating the projected OVEC costs used in
18 Mr. Lisowski's modeling?

19 A. No.

20 Q. So it would be correct to say that you
21 can't speak to whether those cost projections
22 accurately reflect potential environmental component
23 costs for the OVEC plants.

24 A. That would be correct.

25 Q. And, sorry, I can't recall if you

1 testified to this already, were you involved in
2 providing the EDU team with projected EFORD
3 percentages for the Sammis and the OVEC and
4 Davis-Besse?

5 A. I did not provide projections for OVEC.
6 I did provide EFOR projections for Sammis and for
7 Davis-Besse.

8 Q. And are you aware that PJM's EFORD
9 formula, whatever you want to call it, excludes
10 events that are outside of management control?

11 A. Yes.

12 Q. And did you provide historical EFORD data
13 to the EDU team?

14 A. I don't remember. I can speak pretty
15 well to the forecasts from memory, but I don't
16 remember what was provided from a historical
17 perspective.

18 Q. That's fine. We can save that one. For
19 the future forecasts where the EFORD projections that
20 you provided, do you know whether those also excluded
21 events outside of management control?

22 A. They were in large part based upon
23 historical, which I can say had few, if any, events
24 that would have been considered outside of management
25 control.

1 Q. Okay. So just to make sure I'm
2 understanding your answer correctly, you believe that
3 historically Sammis just hasn't had many events
4 outside of management control.

5 A. Not events that would meet the PJM
6 definition.

7 Q. And does the same go for Davis-Besse?

8 A. Yes.

9 MS. FLEISHER: That's all I have for the
10 public session.

11 EXAMINER ADDISON: Thank you.

12 Mr. O'Brien, any questions?

13 MR. O'BRIEN: No questions, your Honor.

14 EXAMINER ADDISON: Mr. Kurtz?

15 MR. KURTZ: No questions.

16 EXAMINER ADDISON: Mr. Sauer.

17 MR. SAUER: Thank you, your Honors.

18 - - -

19 CROSS-EXAMINATION

20 By Mr. Sauer:

21 Q. Good morning, Mr. Harden. My name is
22 Larry Sauer. I'm an attorney for the Office of the
23 Ohio Consumers' Counsel.

24 A. Good morning.

25 Q. I have some questions for you this

1 morning. If you could turn to page 4 of your
2 testimony. I'm looking at lines 16 through 23 where
3 you're talking about the renewal application.

4 A. Yes.

5 Q. When was the current license that you're
6 operating under granted?

7 A. The precise date I do not remember. It
8 was in 1977. It would have been on or around April.

9 Q. So this is the first renewal application?

10 A. Yes, this is the first renewal.

11 Q. Is it typical to file a renewal
12 application seven years in advance of the current
13 license expiring?

14 A. I don't know that there's a number of
15 years in advance that I would call typical. What I
16 would say is the regulations are set up such that as
17 long as you submit it five years or more in advance
18 of the expiration, even if the Nuclear Regulatory
19 Commission hasn't completed their review of the
20 application, as long as they accepted it, you can
21 continue to operate past the current license
22 expiration. It's called a timely renewal doctrine.
23 So most nuclear plants in the country that have
24 submitted applications have submitted them well in
25 advance of the five years.

1 Q. I think Ms. Hussey asked you a question
2 regarding the 2017 expiration date for the current
3 license would fall after the commencement of the
4 proposed transaction, correct?

5 A. Yes, she did ask questions on that.

6 Q. And hypothetically, if Davis-Besse's
7 license would not be renewed, and I understand you're
8 not an attorney, but what would your expectation be
9 for the proposed transaction if it were approved and
10 Davis-Besse's license would not have renewed?

11 A. I guess that's a hypothetical that has a
12 couple of points that comes in my mind to be able to
13 answer. Unless it's rejected, the plant continues to
14 operate, and so it would have no effect. The NRC
15 staff, the technical review of the application has
16 been completed. There's no technical review left
17 to -- or no technical aspects or intervention left on
18 the application, just two procedural steps. So it's
19 tough for me to accept the hypothetical you gave
20 knowing that there's nothing technical in the way of
21 approval other than two procedural steps in final
22 issuance of a license. So I have no reason to
23 believe that it won't be approved.

24 Q. Fair enough. And I understand that from
25 your perspective, were there discussions during the

1 negotiation of the proposed transaction as to what
2 might happen in the event the license for Davis-Besse
3 would not be renewed for some reason?

4 A. Yes. There were some discussions. At
5 the time that the term sheet was developed, there was
6 still ongoing intervention in the license renewal
7 application and because of that ongoing intervention,
8 there was language developed and put in Section 4 of
9 the term sheet that provided the language that
10 Davis-Besse being part of this agreement would be
11 subject to the license being renewed.

12 Q. Did that language make it into the term
13 sheet that it be contingent or subject to the license
14 being approved?

15 A. In section 4 of the term sheet where it
16 describes facilities, it describes Davis-Besse and
17 puts subject to condition that the NRC reviews are
18 the operating license for the Davis-Besse facility
19 for a 20-year term.

20 Q. And if that condition can't be met for
21 some reason, as I said, hypothetically, there is a
22 rejection by the NRC of the license renewal, what
23 happens in your estimation to the proposed
24 transaction should that condition not be met?

25 A. As I said, since the technical part of

1 the review is complete by the NRC, I don't consider
2 it credible. That said, I believe the language
3 that's in the description of facilities, if
4 Davis-Besse's license were not to get renewed and
5 Davis-Besse were to cease operation, it would simply
6 be removed from the agreement.

7 Q. Do you have the term sheet in front of
8 you, page 3 of 15, there's some discussion in the
9 event that there's an extended outage of 180
10 consecutive days. Do you see that?

11 A. This is under section 8, the unit
12 contingent section?

13 Q. Section 8.

14 A. Yes.

15 Q. In the prior five-year period, how many
16 outages of 180 consecutive days has Sammis
17 experienced?

18 A. One that I can remember.

19 Q. And when was that?

20 A. I believe that was 2011 into 2012.

21 Q. And did that affect just one of the units
22 at Sammis?

23 A. Yes, Sammis unit 6, if I remember
24 correctly.

25 Q. How about Davis-Besse, in the past five

1 years, have there been outages of 180 consecutive
2 days?

3 A. Not that I remember. I don't believe so.

4 Q. How about either of the OVEC units, Kyger
5 Creek or Clifty Creek, have there been outages in the
6 past five years of 180 days or more consecutively?

7 A. I don't know. I have not looked back
8 that far for the OVEC units.

9 EXAMINER PRICE: Let's go off the record.

10 (Discussion off the record.)

11 EXAMINER PRICE: Back on the record.

12 Q. (By Mr. Sauer) If you could turn to page
13 3 of your testimony, please, lines 16 through 18.

14 A. Yes.

15 Q. There's some discussion of the
16 replacement of the steam generators at Davis-Besse.
17 Do you see that?

18 A. Yes.

19 Q. Would the cost of those generator
20 replacements be confidential?

21 A. I would prefer to discuss it in the
22 confidential section.

23 Q. Okay. I'll hold that.

24 On page 10, you discuss the Sammis
25 retrofit of WFGD scrubbers on lines 15 to 20. Do you

1 see that?

2 A. Yes.

3 Q. In 2010, was the future of Sammis
4 uncertain?

5 A. I don't know.

6 Q. Do you consider the future of Sammis
7 today uncertain?

8 A. Yes, I do.

9 Q. Is the \$1.8 billion investment that was
10 made in 2010, is that a contributing factor to your
11 opinion that the future of Sammis is uncertain?

12 A. I don't know that I would consider it a
13 contributing factor. I mean, the go-forward
14 decisions on whether to maintain a power plant in
15 operation are largely based on a forward look and not
16 a backward look. If a power plant in the near term
17 can cover its cash but it's expending, you know, its
18 daily expenses, it can stay in operation for some
19 period of time. Investors typically don't care to
20 hear that. They want a return on investment, your
21 invested capital, not just covering your daily
22 expenses, which is viewed on a more longer-term
23 basis. So that's where the invested capital comes in
24 as a longer-term view. But the challenges for Sammis
25 and Davis-Besse in my opinion are due to nearer term

1 market and cash flow than they are from a longer term
2 and will they be able to cover their cost and plus a
3 return on capital. A power plant has to be able to
4 do both to stay a viable asset.

5 Q. Do you know what the depreciation expense
6 is relative to that \$1.8 billion investment?

7 A. I don't remember.

8 EXAMINER PRICE: Do you know the expected
9 life of the scrubbers?

10 THE WITNESS: I wouldn't define an
11 expected life of the scrubbers as a finite period
12 because we have to go into regular replacement on
13 many parts and pieces of the scrubbers that is
14 factored in a term that power plants would like to
15 use is life cycle management. It's just how
16 frequently do you need to replace pumps and valves
17 and catalyst layers and things like that. And, you
18 know, we have that built into our business plans on
19 what frequency do we need to go in and replace pumps,
20 fans, catalysts layers, those types of things, which
21 includes the scrubber equipment.

22 EXAMINER PRICE: From an accounting
23 perspective you would have a depreciation period for
24 the scrubbers?

25 THE WITNESS: The depreciation period

1 from an accounting perspective would be over the
2 forecasted life of the plant from an accounting
3 perspective. Accounting has a forecasted life of the
4 plant, and so they depreciate it over that life.

5 EXAMINER PRICE: And do you know what
6 that period is?

7 THE WITNESS: I do not know from memory
8 what that period is. I'd be guessing.

9 EXAMINER PRICE: Thank you. Just to be
10 clear, though, the \$1.8 billion investment in the
11 scrubbers is part of the legacy cost components under
12 the term sheet; is that right?

13 THE WITNESS: It's part of the book value
14 of the plant. So it's part of the invested capital
15 of the plant today. So that's part of the legacy
16 capital.

17 EXAMINER PRICE: And today, this hearing
18 is the Commission's only opportunity to review that
19 cost; is that right?

20 THE WITNESS: As far as I know.

21 Q. And to follow up, the return on equity
22 that is agreed upon in the term sheet would be
23 applied to that \$1.8 billion investment?

24 A. It would be applied to some portion of
25 it. Some portion of it has already been depreciated.

1 Actually, I think I want to clarify that.
2 The contract price is where it defines what is
3 covered, and the depreciation payment is described on
4 page 5, Section 3, the capacity payment and the
5 weighted average cost of capital defined in the
6 appendix is based upon an equity component for FES in
7 the plan, and not being an accountant, I can't speak
8 to the relative differences between those.

9 Q. Okay. I think Ms. Hussey had asked you
10 some questions about your input on the fuel payment
11 on page 5 of the term sheet under section 1, little
12 i?

13 A. Yes.

14 Q. FES holds a large number of the fuel
15 contracts, correct?

16 A. Yes.

17 Q. If the proposed transaction would be
18 approved, is it possible that under that -- with that
19 arrangement in place, that Sammis could receive a
20 larger -- if there are larger cost coal contracts
21 than they normally would?

22 A. I can't speak inclusive to all the
23 contracts as they're handled under Mr. Moul's former
24 organization in FES. What I can speak to is the
25 contracts that I'm familiar with and aware of, and

1 some of those are very specific to the Sammis plant
2 just because of location. So it's a contract for the
3 coal and the delivery to the location because both
4 the delivery contracts and the contract for the coal
5 itself are usually done in combination or in tandem.

6 Q. I think you testified earlier 50 percent
7 of the Sammis contracts were Ohio-based contracts.

8 A. Yes.

9 Q. The other 50 percent are contracts that
10 are not Ohio-based, correct?

11 A. No. Some of the non-Ohio coal is under
12 the same contract with the same company that the Ohio
13 coal comes from because that company has operations,
14 mining operations, inside of Ohio as well as some of
15 the surrounding states right across the river.

16 Q. But all the coal contracts are not plant
17 specific, are they?

18 A. I don't believe so. Further details on
19 that would be a better question for Witness Moul.

20 Q. Would the companies have an opportunity
21 under the proposed transaction if it was approved to
22 verify that coal contracts being charged to Sammis
23 were allocated to them in an appropriate manner such
24 that they weren't receiving the higher cost coal
25 contracts?

1 MR. LANG: Could I have the question read
2 back, please?

3 EXAMINER ADDISON: You may.

4 (Record read.)

5 MR. LANG: And, your Honor, I would
6 object again in the statement of the question to the
7 proposed transaction being approved and then would
8 request clarification in terms of -- the question
9 from counsel was the companies have an opportunity,
10 whether he's referring to the utilities in this case
11 or FES. It just wasn't clear to me in the question.

12 EXAMINER ADDISON: Would you mind
13 rephrasing, Mr. Sauer?

14 MR. SAUER: Yes. I'll try to do that.

15 EXAMINER ADDISON: Thank you.

16 Q. (By Mr. Sauer) Assuming the proposed
17 transaction is approved, would the companies have an
18 opportunity to challenge what FES might consider to
19 be good utility practice of allocating higher cost
20 coal contracts to Sammis?

21 MR. LANG: Same objection. I'm sorry,
22 your Honor.

23 EXAMINER ADDISON: I'll provide Mr. Sauer
24 a little leeway on the phrasing if the witness
25 understands the question.

1 A. I believe you're referring to the
2 companies being Ohio Edison and Toledo Edison and
3 Cleveland Electric Illuminating Company and whether
4 they would have the opportunity to audit and
5 potentially challenge how fuel allocation is done for
6 Sammis?

7 Q. Yes.

8 A. I believe section 18, books and records;
9 audit, of the term sheet adequately provides
10 provisions for the companies to request records and
11 audit. And as I stated earlier, under good utility
12 practice, if they feel that FES is in breach of any
13 provision of the term sheet, they could challenge
14 that.

15 Q. And I think you had mentioned in your
16 testimony earlier that like any other contract that
17 you're familiar with between a buyer and a seller,
18 you would have that kind of opportunity to challenge,
19 correct?

20 A. That is correct.

21 Q. But this isn't really a typical contract,
22 is it, because you've got a situation with the
23 companies are billed by FES, the costs under the
24 proposed transaction, those costs would then be
25 passed on to the companies' customers, correct?

1 MR. LANG: Objection, your Honor.

2 EXAMINER ADDISON: Grounds?

3 MR. LANG: Both argumentative and
4 ambiguous and beyond the scope of his testimony in
5 terms of -- I'm not sure what typical means and with
6 regard to this witness in terms of costs being passed
7 through to the customers is far outside the scope of
8 his testimony. Again, there's some -- he certainly
9 has knowledge about the term sheet. He can answer
10 questions about what categories are included in the
11 contract price in the term sheet. Mr. Sauer is
12 asking him a question beyond that scope.

13 EXAMINER ADDISON: Mr. Sauer, response?

14 MR. SAUER: I'll rephrase, your Honor.

15 EXAMINER ADDISON: Thank you.

16 Q. (By Mr. Sauer) Are you familiar with the
17 proposed transaction to the extent that costs that
18 FES will be passing on to the companies would
19 ultimately be charged to customers?

20 A. I'm not familiar with the mechanisms of
21 how things go from the companies to the customers and
22 what's allowed and what's not allowed. I'm not
23 familiar with that at all.

24 Q. Assuming that the costs that FES pass on
25 to the companies under the proposed transactions were

1 incurred using good utility practices, would you have
2 any reason to believe that those costs then wouldn't
3 be passed on to the companies' customers?

4 MR. LANG: Objection, your Honor.

5 EXAMINER ADDISON: Grounds?

6 MR. LANG: He just stated he wasn't
7 familiar at all with the mechanism between the
8 companies and the customers. Ms. Mikkelsen provided
9 extensive testimony for that. She was on the stand
10 for three days and I believe answered similar
11 questions. So it's both beyond the scope of his
12 testimony and redundant to what's already been
13 testified to here.

14 EXAMINER ADDISON: Sustained.

15 Q. Mr. Harden, how long have you been
16 involved in the nuclear energy industry?

17 A. For more than 25 years.

18 Q. And the NRC is the federal regulatory
19 body with authority over nuclear reactors?

20 A. Yes.

21 Q. And that would include Davis-Besse?

22 A. Yes.

23 Q. And in your career, you've dealt with the
24 NRC?

25 A. Yes.

1 Q. And the NRC has enforcement authority
2 over nuclear reactors?

3 A. Yes.

4 Q. Does the NRC have two enforcement
5 categories, escalated and non-escalated?

6 A. Yes.

7 Q. And as a result of either process, a
8 formal notice of violation can be issued?

9 A. Yes.

10 Q. And does the NRC keep records of
11 escalated enforcement actions?

12 A. Yes.

13 Q. And are those records publicly available?

14 A. Yes.

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

16 EXAMINER ADDISON: You may.

17 MR. SAUER: If I could have this document
18 marked as OCC Exhibit 7.

19 EXAMINER ADDISON: So marked.

20 (EXHIBIT MARKED FOR IDENTIFICATION.)

21 Q. Mr. Harden, have you ever seen the
22 document that I've handed to you that's been marked
23 as OCC Exhibit 7?

24 A. I have never seen this document.

25 Q. If you can turn to page 7 of this

1 document, 7 of 13.

2 MR. LANG: Are you using the page number
3 in the upper right corner?

4 MR. SAUER: Yeah, I believe that's
5 correct.

6 MR. LANG: There's a couple different
7 numbers.

8 Q. (By Mr. Sauer) I'm sorry. If you could
9 turn to page 5 of 13. There's a discussion that
10 actually starts on page 4 of 14 regarding
11 Davis-Besse. The date is 5/14/07. Do you see that?

12 MR. LANG: Objection, your Honor.

13 EXAMINER ADDISON: Grounds?

14 MR. LANG: Counsel has not established
15 familiarity of this document with this witness.

16 EXAMINER ADDISON: Mr. Sauer?

17 MR. SAUER: I'm getting there, your
18 Honor. There are violations noted in the document.
19 I'm just going to ask Mr. Harden if he's familiar
20 with the various violations that the NRC has levied
21 on Davis-Besse.

22 EXAMINER ADDISON: We'll provide
23 Mr. Sauer a little leeway.

24 MR. SAUER: May we go off the record for
25 a moment, your Honor.

1 EXAMINER ADDISON: We may.

2 (Discussion off the record.)

3 EXAMINER ADDISON: Let's go back on the
4 record.

5 Q. (By Mr. Sauer) Mr. Harden, on page 3 of
6 this document -- I'm sorry. 3 of 13, there's --
7 about two-thirds of the way down, there's a heading
8 Davis-Besse Docket 050-0346. Are you familiar with
9 that docket?

10 A. Yes. That's simply the number the
11 Nuclear Regulatory Commission uses to refer to the
12 station.

13 Q. Okay. And then if you continue back to
14 page 4, there is a designation NOV. Is that a notice
15 of violation on 4-30 of 2010?

16 A. Yes.

17 Q. And it says it was issued to FirstEnergy
18 Nuclear Operating Company for a severity level III
19 problem for the failure to implement in (1) 10 CFR
20 50.71 maintenance of records, making of a report. Do
21 you see that?

22 MR. LANG: Objection, your Honor.

23 EXAMINER ADDISON: Grounds?

24 MR. LANG: Reading from the document and
25 asking him whether he sees what the document says is

1 not establishing familiarity. And that's the grounds
2 for the objection.

3 EXAMINER ADDISON: Mr. Sauer.

4 MR. SAUER: That was my next question, if
5 he was familiar with that notice of violation.

6 EXAMINER ADDISON: Please proceed.

7 MR. SAUER: Thank you.

8 Q. (By Mr. Sauer) Mr. Harden, are you
9 familiar with that notice of violation from the NRC?

10 A. Let me read it.

11 No, I'm not. I didn't have any
12 responsibility for Davis-Besse during this time
13 period.

14 Q. And how long have you had responsibility
15 for Davis-Besse?

16 A. Direct responsibility, only since taking
17 my current position in March of this year. I was
18 responsible for engineering at Davis-Besse since
19 April of 2013.

20 Q. And as part of your responsibilities, you
21 didn't have any cause to look back at the operating
22 history of Davis-Besse and the interaction with the
23 NRC?

24 A. Not -- operating history, yes, I do
25 review particularly from an equipment reliability,

1 those things. From an interactions with the Nuclear
2 Regulatory Commission, I would not look back at the
3 lowest level type violations which this would be one
4 of.

5 Q. On page 5 of 13, there's a notice of
6 violation dated 4/21/05 that has a \$5,450,000 penalty
7 associated with that. Are you familiar with that
8 violation?

9 A. I'm familiar with it only in general
10 terms. I worked for another company elsewhere in the
11 nuclear industry and most -- all stations in the
12 domestic nuclear industry have been trained on the
13 lessons learned relative to what caused the
14 referenced violation.

15 Q. Based on your understanding, what caused
16 the referenced violation that was levied on 4/21/05?

17 A. The cause evaluation that I've been
18 trained on, it was voluminous, but I think I can
19 summarize it --

20 Q. Please.

21 A. -- in simple terms. It was in large part
22 based upon what the nuclear industry would term
23 safety culture at the plant.

24 Q. And the fact that a \$5.5 million penalty
25 was levied, does that elevate the severity of the

1 penalty in your mind?

2 A. I'm not sure I understand your question.

3 Q. Well, the previous violation we were
4 looking at, you said you wouldn't have focused on
5 because it was a lower level violation. Would you
6 consider this to be a lower level violation?

7 A. Oh, absolutely not.

8 Q. And if you look at page 6 of 13, there's
9 another notice of violation which is dated 5/7,
10 May 7th of 2004. Do you see that?

11 A. Yes, I do.

12 Q. And are you familiar with that violation?

13 A. No, I'm not.

14 Q. And there's a March 5th, 2004, violation
15 noted on page 6 as well, failure to adequately
16 implement design control measures. Do you see that?

17 A. I do.

18 Q. Is that a violation you would have been
19 familiar with?

20 A. No, I'm not familiar with that one
21 either.

22 Q. There's a violation on October 7th of
23 2003, inability of the emergency core cooling system
24 sump to perform its safety function. Do you see
25 that?

1 A. I do.

2 Q. And are you familiar with that violation?

3 A. Not details of it. I'm only familiar
4 from operating experience that was shared across the
5 industry when I worked elsewhere.

6 Q. So would you consider that one to be a
7 higher level notice of violation that the results of
8 that were known industrywide?

9 A. Yes. A yellow finding I would consider
10 to be a higher level and gets shared at least to some
11 extent across the city for learning.

12 Q. How many different categories or colors
13 does the NRC have for their violations? You pointed
14 this one was yellow. I see one that's labeled white.
15 When we were talking earlier that resulted in the
16 \$5.5 million penalty is labeled red.

17 A. There are four; green, white, yellow and
18 red findings.

19 Q. And on August 6th -- there's another
20 notice of violation on February 19th of 2003, failure
21 of the licensee to conduct an adequate evaluation of
22 the radiologic hazards. Are you familiar with that
23 notice of violation?

24 A. No, I'm not.

25 Q. And there's another notice of violation

1 on August 8th -- I'm sorry, August 6th of 1999
2 involving a failure to maintain the design of a
3 pressurized spray valve and an adequate corrective
4 action. Do you see that?

5 A. I see it.

6 Q. Is that a violation you would be familiar
7 with?

8 A. No, I'm not. That's one of the lowest
9 level violations that does not get shared across the
10 industry.

11 Q. There's another notice, or maybe it's a
12 continuation of this same violation, on October 22nd
13 of 1996 continuing over to page 7, it has a \$50,000
14 penalty assessed it appears. Are you familiar with
15 that violation?

16 MR. LANG: Your Honors, objection at this
17 point just to the course of questioning here. We've
18 gone back in time. I'm not sure what the point is
19 that OCC counsel is trying to achieve. To the extent
20 that we're now back in the 1990s, I think we're far
21 beyond any bounds of relevance as to what can be
22 achieved. And asking the witness who is familiar
23 with Davis-Besse operations much more recently about
24 things that happened in the early 2000s and the late
25 '90s I think is unnecessary for purposes of this case

1 and is irrelevant.

2 EXAMINER ADDISON: Mr. Sauer, were you
3 going to just ask the two remaining dates on this
4 particular docket number?

5 MR. SAUER: I think this is the last one,
6 your Honor, on page 7, the top of page 7.

7 EXAMINER ADDISON: Go ahead and ask him
8 if he's familiar and then we can move on to another
9 line of questioning.

10 Q. (By Mr. Sauer) Is that a violation that
11 you are familiar with?

12 A. No, it is not. Again, it's the lowest
13 level of severity that does not get the same level of
14 visibility from across the industry. I'm not
15 familiar with it.

16 Q. There's a \$50,000 notation there. Would
17 you take that there was a fine levied by the NRC for
18 that violation?

19 MR. LANG: Objection, your Honor.

20 EXAMINER ADDISON: Grounds?

21 MR. LANG: He's asking him to speculate
22 as to what that means in this document that he says
23 he hasn't seen before.

24 EXAMINER ADDISON: Sustained.

25 Q. Mr. Harden, the violations that we've run

1 through, some of which you were familiar with because
2 of the industry, it was awarded to them and some you
3 weren't familiar with, are there typically penalties
4 assessed by the NRC with regards to their violations?

5 A. I'm not sure what you would call
6 typically, but as you were thumbing me through this
7 document when I was looking at violations with other
8 plants, it appears that particularly in the '90s and
9 early 2000s, there were much more frequent fines
10 associated with the penalties.

11 Q. And since that time, the NRC has not been
12 prone to levy fines as much as they did in the '90s;
13 is that what you're saying?

14 A. No. There was a revision to the reactor
15 oversight process that separated what would incur
16 monetary penalties and what would incur other types
17 of actions required by a licensee, and I don't
18 remember when that revision to the oversight process
19 occurred, but up to that point in time, my
20 recollection from being in the industry was not
21 uncommon to see monetary penalties after that time,
22 it became much less frequent.

23 Q. Does the NRC still use the four color
24 codes that you talked about earlier with regards to
25 their violations?

1 A. Yes.

2 Q. And if you would get a notice of a red
3 violation today, would you expect a penalty?

4 A. Not necessarily. It would depend on the
5 circumstance and whether the Nuclear Regulatory
6 Commission considered it to be something that was --
7 to be honest, I don't know what all the
8 considerations that go into it from memory, but there
9 are many considerations that go into whether they
10 level a fine along with the finding.

11 Q. If it's a notice of a yellow violation,
12 is there a potential there could be a fine?

13 A. I don't know if they can issue a fine
14 with a yellow violation. I've not seen any.

15 Q. Okay. How about with white, any
16 violations under the NRC notice of violation that is
17 coded white would there be a potential for penalty?

18 A. I can say I don't believe I ever saw a
19 white penalty with a fine.

20 Q. What about a green notice of violation
21 from the NRC, could that be accompanied with the
22 penalty or the fine?

23 A. I have never seen a fine accompanying a
24 green finding. Green is the lowest level of safety
25 significance.

1 Q. Now, if the post transaction is approved
2 and the NRC would levy a violation for the operations
3 of Davis-Besse, would any associated fine or penalty
4 with that violation be included in a cost that would
5 be passed on to the companies under the definition of
6 costs under the proposed transaction?

7 MR. LANG: Objection, your Honor. And,
8 again, mischaracterizing what's before the
9 Commission.

10 EXAMINER ADDISON: Care to rephrase,
11 Mr. Sauer?

12 Q. Would you consider if the NRC would levy
13 a fine on the operations of Davis-Besse for some
14 reason, would that constitute you would not consider
15 that to be -- I'll rephrase.

16 In the event that the NRC would levy a
17 fine on the Davis-Besse for its operations, would
18 the -- would in your opinion the actions that the
19 plant had taken that lead to the fine, would you
20 consider those actions to be not good utility
21 practice

22 A. I think I can answer that in general
23 terms. I don't know that I can encompass every
24 scenario that would occur.

25 Q. Sure.

1 A. But in general terms, if a finding by the
2 Nuclear Regulatory Commission is severe enough from a
3 safety significance and from their process they
4 determine that a fine is warranted, I would tell you
5 typically that would not fall under a good utility
6 practice that lead to that.

7 Q. And would you -- regardless of whether
8 it's white, green, yellow, or red, any violation from
9 the NRC would not be considered good utility
10 practice.

11 A. No, I would not go so broad as to say any
12 violation from the NRC does not constitute a good
13 utility practice, because the NRC will issue a
14 finding and a violation of even a component failure
15 that if you had just replaced it with a brand new
16 component from the vendor, if it has safety
17 significance, they would still issue a finding and a
18 potential violation. It may not be accompanied by a
19 fine, but they are still required to issue a
20 violation or a finding.

21 MR. SAUER: May I approach, your Honor?

22 EXAMINER ADDISON: You may.

23 MR. SAUER: I have a document I'd like
24 marked as OCC Exhibit 8.

25 EXAMINER ADDISON: So marked.

1 (EXHIBIT MARKED FOR IDENTIFICATION.)

2 Q. Mr. Harden, I've handed you a document
3 that's been marked as OCC Exhibit No. 8. Have you
4 ever seen this document?

5 A. No, I have not.

6 Q. If you would turn to page 6, there's a --
7 at the very bottom there's some discussion of
8 Davis-Besse. Do you see that?

9 A. I do.

10 Q. And then there is an event text on page 7
11 that discusses a degraded condition due to discovery
12 of pressure boundary leakage and then there's "On
13 June 6, 2012, at 1956 EDT, with the Unit shutdown for
14 refueling, leakage was identified from a 3/4-inch
15 weld during Reactor Coolant System (SCS) walkdown
16 inspections." Do you see that?

17 MR. LANG: Objection, your Honor.

18 EXAMINER ADDISON: Grounds?

19 MR. LANG: No familiarity established
20 with the document and permission to move to strike
21 Mr. Sauer reading from the document until he's
22 established that Mr. Harden is familiar with what he
23 wants to ask him about, which I believe he can do
24 without reading from the document.

25 EXAMINER ADDISON: I agree. I'll defer

1 ruling on the motion to strike until we can lay the
2 proper foundation.

3 Mr. Sauer, would you mind asking some
4 more questions?

5 MR. SAUER: Thank you, your Honor.

6 Q. (By Mr. Sauer) Are you familiar with that
7 particular event that is described on page 7 of the
8 document that's marked as OCC Exhibit 3?

9 A. I'm somewhat familiar with the event,
10 yes.

11 Q. Did that event lead to a notice of
12 violation from the NRC?

13 A. I don't remember. If it did, it would
14 have been one of the lowest level severities.

15 Q. Are you familiar with the term "capacity
16 factor"?

17 EXAMINER PRICE: Could I have the
18 question reread, please.

19 (Record read.)

20 A. Yes, I am.

21 Q. And what's your understanding -- what is
22 capacity factor?

23 A. In general terms, it's the amount of
24 energy produced by a plant divided by the amount of
25 energy that could be produced. That's a simple way

1 of saying it.

2 Q. And do you know what the capacity factor
3 is for Sammis?

4 A. No, I do not, because for the fossil
5 units in the fossil industry, we don't focus as much
6 on capacity factor. We focus on availability, the
7 equivalent availability factor. That's the more
8 common term focused on in the fossil industry.
9 Nuclear plants, on the other hand, use more common
10 terminology, capacity factor and forced loss rate
11 instead of equivalent availability factor and EFOR or
12 equivalent forced outage rate.

13 Q. Do you know what the capacity factor is
14 for Davis-Besse?

15 A. I don't know precisely down to the
16 decimal point, but it is greater than 98 percent
17 today.

18 MR. SAUER: May I approach, your Honor?

19 EXAMINER ADDISON: You may.

20 MR. SAUER: May I have this exhibit
21 marked as OCC Exhibit 9?

22 EXAMINER ADDISON: So marked.

23 (EXHIBIT MARKED FOR IDENTIFICATION.)

24 Q. Mr. Harden, are you familiar with the
25 document that I just handed you? And it's not a

1 complete document obviously, but it is an excerpt
2 from the -- is it your understanding that it would be
3 an excerpt from the license renewal application of
4 Davis-Besse?

5 A. I believe you asked me multiple
6 questions.

7 Q. I'm sorry.

8 A. Am I familiar? I'm familiar with it in
9 general terms; although, I have not read the whole
10 document. And this does look like an excerpt from
11 the licensing internal application.

12 Q. And if you would look under the Section
13 "4.2.1.1 Effective Full Power Years (EFPY)
14 Projection." Going down four lines, it says "The
15 Davis-Besse operating license was issued in April 22,
16 1977 and the plant lifetime capacity factor through
17 April 2006 is .622." Do you see that?

18 A. I do.

19 Q. And the capacity factor between 2006 and
20 2008 is .9. Do you see that?

21 A. Yes.

22 Q. And are you familiar with the World
23 Nuclear Association?

24 A. I'm not sure. If you're referring to the
25 World Association of Nuclear Operators, I'm familiar

1 with that organization.

2 MR. SAUER: May I approach, your Honor?

3 EXAMINER ADDISON: You may.

4 MR. SAUER: If I could have a document
5 marked OCC Exhibit No. 10.

6 EXAMINER ADDISON: So marked.

7 (EXHIBIT MARKED FOR IDENTIFICATION.)

8 Q. (By Mr. Sauer) Mr. Harden, I've handed
9 you a document that is from the World Nuclear
10 Association. Have you ever seen this document?

11 A. No, I have not.

12 Q. On page 2 of the document, they have
13 reactor operational details and capacity factors for
14 the Davis-Besse plant from the year 1977 through
15 2013. Do these capacity factors look accurate to
16 you?

17 MR. LANG: Objection, your Honor.

18 EXAMINER ADDISON: Grounds?

19 MR. LANG: The witness has said he has no
20 familiarity with this document. He's not familiar
21 with the World Nuclear -- whatever it's called, the
22 World Nuclear Association, which seems to be at least
23 from this document looking at the last page some kind
24 of private entity in Great Britain, and so it's not a
25 document that would fall under any category of

1 self-authentication. So I would object to the use of
2 it with this witness.

3 EXAMINER ADDISON: Mr. Sauer?

4 MR. SAUER: I have nothing at this time
5 on this, your Honor. You can withhold the admission
6 of it if it doesn't prove to be a document we want in
7 the record.

8 EXAMINER ADDISON: Thank you.

9 MR. SAUER: If I could have a moment.

10 EXAMINER ADDISON: You may.

11 MR. SAUER: May I approach, your Honor?

12 EXAMINER ADDISON: You may.

13 MR. SAUER: If I could have this document
14 marked as OCC Exhibit 11.

15 EXAMINER ADDISON: So marked.

16 (EXHIBIT MARKED FOR IDENTIFICATION.)

17 Q. Mr. Harden, I've handed you a document
18 that's marked as OCC Exhibit 11, and it's a discovery
19 response to the Sierra Club Set 1 Interrogatory 11,
20 and you're noted as the witness responsible, correct?

21 MR. LANG: And, your Honor, I think we
22 would stipulate that Mr. Harden is responsible for
23 this document. I would just note that it is labeled
24 as "Competitively Sensitive Confidential" at the top.

25 MR. SAUER: I'm sorry. Do you want to

1 hold off on this?

2 MR. LANG: If we could have it marked as
3 confidential. I'm assuming that if you have
4 questions about it, it would probably be in the
5 confidential transcript, Mr. Sauer.

6 MR. SAUER: I was going to ask him about
7 capacity factors on the second page, so I can wait
8 and do that.

9 MR. LANG: Let's do that later, please.

10 MR. SAUER: I think at this point I may
11 be finished on the public session then.

12 EXAMINER ADDISON: Thank you, Mr. Sauer,
13 and I believe we still had a pending motion to strike
14 as to those statements read from what was marked as
15 Exhibit OCC No. 8. I will go ahead and grant that
16 motion to strike at this time.

17 MR. LANG: Thank you, your Honor.

18 EXAMINER ADDISON: You're welcome.

19 MR. FISK: Your Honor, just to clarify,
20 did we mark this confidential document as being
21 marked?

22 EXAMINER ADDISON: Yes, it will be. OCC
23 Exhibit No. 11 will be marked as confidential.

24 MR. FISK: Okay.

25 EXAMINER ADDISON: Mr. Lindgren, any

1 questions for the public session?

2 MR. LINDGREN: Yes, thank you.

3 - - -

4 CROSS-EXAMINATION

5 By Mr. Lindgren:

6 Q. Good afternoon, Mr. Harden.

7 A. Good afternoon.

8 Q. If the decision were made today to retire
9 and decommission Davis-Besse, how long would it take
10 to shut down the plant and have it stop producing
11 electricity? And I'm not referring to the safe
12 storage period you were talking about, just to shut
13 it down.

14 A. To physically shut down the plant could
15 be done overnight. That said, I'm not an expert in
16 the PJM rules, but I believe there's notification
17 that has to be given to PJM.

18 Q. Would you have to notify the NRC as well?

19 A. We would not need to notify them to shut
20 down the plant. We would need to notify them if we
21 were going to cease the operating license. You have
22 two years -- or I believe it's up to two years to
23 notify them if you were permanently ceasing operation
24 of the plant, but you do not need to do that before
25 you shut it down.

1 Q. Thank you. Do you know how much notice
2 you have to give to PJM?

3 A. I don't remember.

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

6 EXAMINER ADDISON: Thank you,
7 Mr. Lindgren.

8 Let's go off the record.

9 (Discussion off the record.)

10 EXAMINER ADDISON: Let's go back on the
11 record.

12 At this time let's break for lunch and
13 we'll pick back up with the confidential session
14 after the Commission meeting is completed. Thank you
15 all. Let's go off the record.

16 (Discussion off the record.)

17 (Thereupon, at 12:54 p.m., a lunch recess
18 was taken until 2:15 p.m.)

19 - - -

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Wednesday Afternoon Session,
September 16, 2015.

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

Mr. Fisk, you had a pending matter
regarding Sierra Club Exhibit No. 37?

MR. FISK: Yes. Thank you, your Honor.
We realized that Exhibit 37 we had inadvertently left
off the companies' second supplemental response which
is just part of a page. I believe we've agreed to
mark that as Sierra Club Exhibit 37A Confidential.
We have copies we can pass out and go ahead and get
that marked.

EXAMINER ADDISON: It will be so marked.

(EXHIBIT MARKED FOR IDENTIFICATION.)

MR. FISK: Thank you.

EXAMINER ADDISON: Will the companies
stipulate to its admission?

MR. LANG: Yes, your Honor.

EXAMINER ADDISON: Thank you. Exhibit
No. Sierra Club 37A Confidential will be admitted
into evidence.

(EXHIBIT ADMITTED INTO EVIDENCE.)

EXAMINER PRICE: Mr. Burk, we had one

1 other issue. We'll do that while on the public
2 document.

3 MR. BURK: Yes, your Honor. In response
4 to a previous request from the Bench, the companies
5 are okay with introducing the aggregate amount of
6 what I'll call the FES projection which was the
7 amount of 2.7 billion on the public record as long as
8 it remains that aggregate number.

9 EXAMINER PRICE: Thank you.

10 EXAMINER ADDISON: At this time we will
11 move into the confidential portion of our transcript.
12 If you have not executed a confidentiality agreement
13 with the companies, please exit the room at this
14 time.

15 (CONFIDENTIAL PORTION EXCERPTED.)
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(OPEN RECORD.)

EXAMINER ADDISON: Mr. Lang, do you have
any redirect for the public portion of the
transcript?

MR. LANG: No, your Honor.

EXAMINER ADDISON: Thank you.

You're excused, Mr. Harden. Thank you
very much for your testimony.

We will be deferring admission of
exhibits until tomorrow morning. We'll reconvene at

2720

1 9:00, and I believe that's it. Thank you all. Let's
2 go off the record.

3 (Thereupon, at 5:45 p.m., the hearing was
4 adjourned.)

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CERTIFICATE

I do hereby certify that the foregoing is
a true and correct transcript of the proceedings
taken by me in this matter on Wednesday, September
16, 2015, and carefully compared with my original
stenographic notes.

Carol A. Kirk, RPR, RMR.

(CAK-79303)

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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 09/16/15 - Volume XII electronically filed by Mr. Ken Spencer on behalf of Armstrong & Okey, Inc. and Gibson, Karen Sue Mrs.