BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

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In the Matter of the Commission Review of the Capacity Charges of Ohio Power Company and Columbus Southern Power Company. : Case No. 10-2929-EL-UNC

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PROCEEDINGS

before Ms. Greta See and Ms. Sarah Parrot, Attorney Examiners, and Commissioner Andre Porter, at the Public Utilities Commission of Ohio, 180 East Broad Street, Room 11-A, Columbus, Ohio, called at 8:30 a.m. on Tuesday, May 15, 2012.

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VOLUME XII - REBUTTAL TESTIMONY

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ARMSTRONG & OKEY, INC.
222 East Town Street, Second Floor
Columbus, Ohio 43215-5201
(614) 224-9481 - (800) 223-9481
Fax - (614) 224-5724

- - -

APPEARANCES:

American Electric Power Service Corporation
By Mr. Steven T. Nourse
Mr. Matthew J. Satterwhite
and Mr. Yazen Alami
One Riverside Plaza, 29th Floor
Columbus, Ohio 43215

Porter, Wright, Morris & Arthur, LLP
By Mr. Daniel R. Conway
and Ms. Christen Moore
41 South High Street
Columbus, Ohio 43215

On behalf of the Ohio Power Company and Columbus Southern Power Company.

Jones Day
By Mr. David A. Kutik
and Ms. Allison Haedt
North Point
901 Lakeside Avenue
Cleveland, Ohio 44114

Calfee, Halter & Griswold LLP
By Mr. James F. Lang
and Ms. Laura McBride
1400 Keybank Center
800 Superior Avenue
Cleveland, Ohio 44114

Calfee, Halter & Griswold, LLP
By Mr. N. Trevor Alexander
Fifth Third Center
21 East State Street
Columbus, Ohio 43215

FirstEnergy Service Company
By Mr. Mark A. Hayden
76 South Main Street
Akron, Ohio 44308

On behalf of the FirstEnergy Service Corporation.

APPEARANCES: (Continued)

McNees, Wallace & Nurick, LLC
By Mr. Frank Darr
and Mr. Samuel Randazzo
Fifth Third Center, Suite 1700
21 East State Street
Columbus, Ohio 43215-4228

On behalf of the Industrial Energy Users of Ohio.

Whitt Sturtevant, LLC
By Ms. Melissa L. Thompson
and Mr. Andrew John Campbell
PNC Plaza, Suite 2020
155 East Broad Street
Columbus, Ohio 43215

On behalf of the Interstate Gas Supply, Inc.

Duke Energy Ohio, Inc.
By Ms. Jeanne W. Kingery
155 East Broad Street, 21st Floor
Columbus, Ohio 43215

Duke Energy Ohio, Inc.
By Ms. Amy B. Spiller
139 East Fourth Street
Cincinnati, Ohio 45202

On behalf of the Duke Retail Sales and Duke Energy Commercial Asset Management.

Vorys, Sater, Seymour & Pease, LLP
By Mr. M. Howard Petricoff
and Ms. Lija Kaleps-Clark
52 East Gay Street
P.O. Box 1008
Columbus, Ohio 43216-1008

On behalf of the Exelon Generation Company, Constellation NewEnergy, Inc., Constellation Energy Commodities Group, Inc., Retail Energy Supply Association, Direct Energy Services, and Direct Energy Business, LLC.

APPEARANCES: (Continued)

Office of the Ohio Consumers' Counsel
By Ms. Kyle L. Kern
and Ms. Melissa Yost
Assistant Consumers' Counsel
10 West Broad Street, Suite 1800
Columbus, Ohio 43215

On behalf of the Residential Customers of Ohio Power Company and Columbus Southern Power Company.

Taft, Stettinius & Hollister
By Mr. Zachary D. Kravitz
and Mr. Mark Yurick
65 East State Street, Suite 1000
Columbus, Ohio 43215

On behalf of the Kroger Company.

Boehm, Kurtz & Lowry
By Mr. Michael L. Kurtz
and Ms. Jody M. Kyler
36 East Seventh Street, Suite 1510
Cincinnati, Ohio 45202

On behalf of the Ohio Energy Group, Inc.

Bricker & Eckler, LLP
By Mr. Thomas O'Brien
100 South Third Street
Columbus, Ohio 43215-4291

Ohio Hospital Association
By Mr. Richard L. Sites
155 East Broad Street, 15th Floor
Columbus, Ohio 43215

On behalf of the Ohio Hospital Association.

Bricker & Eckler, LLP
By Ms. Lisa Gatchell McAlister
100 South Third Street
Columbus, Ohio 43215-4291

On behalf of Ohio Manufacturers

Association.

APPEARANCES: (Continued)

Bailey Cavalieri
By Mr. Dane Stinson
10 West Broad Street
Columbus, Ohio 43215

On behalf of the Ohio Association of School Business Officials, Ohio School Boards Association, Buckeye Association of School Administrators, and Ohio Schools Council.

Bell & Royer Co., LPA
By Mr. Barth E. Royer
33 South Grant Avenue
Columbus, Ohio 43215

On behalf of Dominion Retail, Inc.

Ice Miller, LLP
By Mr. Christopher L. Miller
Mr. Asim Haque
Mr. Gregory J.Dunn
250 West Street
Columbus, Ohio 43215

On behalf of the Association of Independent Colleges and Universities of Ohio and the City of Grove City.

Exelon Business Services Company, LLC
By Ms. Sandy Grace
101 Constitution Avenue, NW
Suite 400 East
Washington, DC 20001

Eimer, Stahl, Klevorn & Solberg, LLP
By Mr. David M. Stahl
224 South Michigan Avenue, Suite 1100
Chicago, Illinois 60604

On behalf of Exelon Generation Company, LLC.

APPEARANCES (Continued):

Kegler, Brown, Hill & Ritter
By Mr. Roger P. Sugarman
Capitol Square, Suite 1800
65 East State Street
Columbus, Ohio 43215

On behalf of National Federation of Independent Business, Ohio Chapter.

Mike DeWine, Ohio Attorney General
By William Wright, Section Chief
Public Utilities Section
Mr. Werner L. Margard, III
Mr. Steven Beeler
Mr. John Jones
Assistant Attorneys General
180 East Broad Street, 6th Floor
Columbus, Ohio 43215-3793

On behalf of the staff of the Public Utilities Commission of Ohio.

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Tuesday Morning Session,
May 15, 2012.

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EXAMINER PARROT: All right. Let's go on the record and begin with brief appearances of the parties, names only, beginning with the company.

MR. NOURSE: Thank you, your Honor. On behalf of Ohio Power Company, Steven T. Nourse and Daniel R. Conway.

MS. KALEPS-CLARK: Thank you, your Honor. On behalf RESA, Exelon, Constellation, and Direct Energy, Lija Kaleps-Clark and M. Howard Petricoff.

MR. HAYDEN: Good morning, your Honor. On behalf of FES, Mark Hayden and Jim Lang.

MS. KINGERY: Good morning, your Honors, on behalf of Duke Energy Retail and Duke Energy Commercial Asset Management, Jeanne Kingery and Amy Spiller.

MR. RANDAZZO: Good morning, everybody. Sam Randazzo and Frank Darr on behalf of the Industrial Energy Users of Ohio.

MR. KURTZ: For the Ohio Energy Group, Mike Kurtz.

MR. YURICK: On behalf of the Kroger Company, Mark Yurick.

MS. THOMPSON: On behalf of Interstate Gas Supply, Inc., Mark Whitt, Andrew Campbell, Melissa Thompson, Vince Parisi, and Matt White.

MS. KERN: On behalf of the Ohio Consumers' Counsel, Kyle Kern and Melissa Yost.

MR. JONES: Good morning, your Honors. On behalf of the staff, Steve Beeler and John Jones.

EXAMINER PARROT: All right. Before we get started again with cross-examination, Mr. Nelson, I remind you you are still under oath, and I believe we left off with FES.

Mr. Lang.

MR. LANG: Thank you, your Honor.

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PHILIP J. NELSON

being previously duly sworn, as prescribed by law, was examined and testified as follows.

CROSS-EXAMINATION

By Mr. Lang:

Q. Good morning, Mr. Nelson.

A. Good morning.

Q. In different portions of the rebuttal testimony there is discussion about the different generating units, in particular Mitchell and Amos, and I would actually just like to start with an exhibit.

MR. LANG: If we could hand this out.

MR. HAYDEN: Your Honors, may I approach?

EXAMINER PARROT: You may.

MR. LANG: Your Honor, I would like to have this marked as FES Exhibit 126.

EXAMINER PARROT: So marked.

(EXHIBIT MARKED FOR IDENTIFICATION.)

Q. You'll see when it gets to you, Mr. Nelson, this is the cover page of the long-term forecast report for Columbus Southern and Ohio Power, and then two pages from that long-term forecast report.

And, Mr. Nelson, you have recently reviewed the generating units for -- of AEP Ohio for purposes of your corporate separation testimony in the modified ESP proceeding; is that correct?

A. Yes.

Q. So I just wanted -- I think, hopefully, we can fairly efficiently move through this, just want to make sure that everybody's clear as to the generating units we are talking about in this case.

And this -- this long-term forecast report that's been marked as FES Exhibit No. 126 on the -- it's actually page 1 -- 136 and 137 of 147.

This shows the Columbus Southern and Ohio Power generating units plus their -- and their location and their capacity; is that correct?
A. It looks to be correct.
Q. And one of the issues that has come up at different times in the case and I believe is mentioned in rebuttal is the Amos plant, and this lists under Ohio Power the Amos 3 unit. Do you see that?
A. Yes.
Q. And the Amos 3 unit has capacity of 857 megawatts?
A. That's correct.
Q. And the -- with regard to Amos, is it correct there's three units? Amos 1 and 2 are owned by Appalachian Power?
A. Yes.
Q. And then what's shown here as the 857 megawatts for Amos 3, that's actually two-thirds of that unit and the other one-third is owned by Appalachian Power?
A. That's correct.
Q. The -- also the -- this shows the Mitchell plants under Ohio Power, Mitchell 1 and 2? Do you see that?

A. Yes.

Q. And they have a total capacity of 1,560 megawatts.

A. That looks correct.

Q. Now, in your testimony in the modified ESP case regarding the transfer of Mitchell and Amos 3 as parts of the corporate separation, the reason that's being done, the transfer to Appalachian Power and Kentucky Power, is that it balances the assets of the pool members after pool termination; is that fair?

A. That's a fair statement, yes.

Q. And you -- as you state in your modified ESP testimony, megawatts associated with AEP Ohio's share of Amos 3 and the Mitchell units are equivalent to the amount of megawatts sold in the last two years to other members of the AEP pool.

MR. CONWAY: I'm sorry.

A. Yes, that' correct.

MR. CONWAY: Never mind.

A. I was going to add, roughly equivalent. It's going to vary year to year.

Q. Now, there's three Cardinal units shown on here. Is it correct that the Cardinal 1 unit is actually owned by Ohio Power; the Cardinal 2 and

Cardinal 3 units are not?

A. That's correct.

Q. Cardinal 2 and Cardinal 3, are they owned by Buckeye Power; is that correct?

A. That's correct.

Q. Okay. The -- so those -- the Cardinal 2 and the Cardinal 3 units would not be in the Ohio Power rate base or the gross plant in service; is that correct?

A. They would not be on the books of Ohio Power Company.

Q. Okay. Also on the Columbus Southern side, it shows the Lawrenceburg units 1 through 6, that's a similar situation, they are not in rate base gross plant in service for AEP Ohio; is that correct?

A. They are a purchased power contract to AEP Ohio. Now, you said similar situation, not quite similar in that A&G is an affiliate of AEP, and they own the plants themselves, you know, power sale back to AEP Ohio. The Cardinal 2 and 3 units are owned by Buckeye Power which is not an affiliate.

Q. Okay. So in both cases for Cardinal 2 and 3 and for the Lawrenceburg units, they are not -- they are not part -- they are not on the books of Ohio Power.

A. That's correct.
Q. And the -- let's see, it's Conesville 3 that is shown here.
A. One thing before we --
Q. Sure, go ahead.
A. I want to mention when we start to talk about Cardinal 2 and 3, there is more to the story in the long-term forecast report, but we can come back to that.
Q. Okay. Conesville 3 that is shown on here is -- Conesville 3 is scheduled to be retired by the end of this year, December 31, 2012?
A. Yes.
Q. And also as part of corporate separation, Wheeling Power's load is planned to be transferred from Ohio Power to Appalachian Power; is that right?
A. Yeah, that's the plan. The plan is actually a merger of Wheeling Power with Appalachian Power and the termination of the AEP Ohio contract with Wheeling Power.
Q. Okay. So Wheeling Power's load being moved to Appalachian Power will actually be done after the merger of Wheeling Power into Appalachian?
A. Yes.
Q. Also on here the -- the other units that

have been discussed in this case, we also have the six Darby units and the four Waterford units. And those -- those are both natural gas units that were acquired by -- well, as shown on here, acquired by Columbus Southern after 2001; is that correct?

A. That's correct. One question for you, is this the complete schedules from the long-term forecast report or are any footnotes missing or anything? I'm used to seeing a lot of footnotes with these type of reports.

Q. Yeah. This is -- this was everything -- this was everything from these pages.

A. Okay.

Q. No footnotes.

A. Sometimes it has, for example, when the units are acquired and so forth.

Q. Yeah. Now, in your testimony starting on page 5 of your testimony at line 2, you refer to Dr. Lesser's what you call the stranded cost plant exclusion. Now, you are aware that he excluded the Waterford and the Darby plants from his analysis because they were acquired after January 1, 2001.

A. I recall that's his rationale.

Q. And because his analysis reflects a pre-2001 embedded generation cost estimate; is that fair?

A. I think that's what he attempted to do. I don't know if I would -- I haven't necessarily checked that theme, but I think that's what he represents it is.

Q. Now, with regard to the -- when we look at, for example, the gross plant in service that Dr. Pearce used in his testimony, that would reflect putting Waterford and Darby to the side, all other AEP Ohio-owned plants were acquired prior to 2001.

A. That sounds correct to me, but.

Q. Thanks. And the -- with regard to the plants listed in the FERC Form 1 that we were looking at, we had identified the -- we had identified Darby and Waterford as being acquired post-2001, and to your understanding, there is no other AEP Ohio-owned plants that -- on this list that were acquired after 2001?

MR. CONWAY: Mr. Lang, let me interject. You refer to the FERC Form 1, are you referring to the long-term forecast report, Exhibit 126, or are you referring to some other document?

MR. LANG: Thank you, Mr. Conway. I think I did misstate that.

Q. With regard to FES Exhibit 126, the

long-term forecast report that we just looked at.
A. Yeah, as far as this list is concerned, that would be true.
Q. Now, as part of the PJM RPM, when the independent marketer calculates the avoided cost rate per generating unit but does not include the full embedded cost of the unit, does that mean that the unit will be retired?
A. Where are you in my rebuttal testimony?
Q. Actually this is a question related to your analysis of Dr. Lesser so I'm -- I'm asking you this particular question with regard --
A. My analysis about Dr. Lesser was pretty short and sweet and related to the fact he's inconsistent in what he did. He took out all these plant costs, most of them. I think he left -- on page 5 of my testimony --
Q. Mr. Nelson, can you answer my question?
MR. CONWAY: Your Honor.
MR. LANG: Could I have my question read back.
MR. CONWAY: Your Honor, I object to the interference with the answer to the question. He should let the witness answer in the fashion he set out to do it. If he has got a problem with it, he

can speak up later, but I object to interrupting the witness.

EXAMINER PARROT: Mr. Nelson, please complete your answer and then we'll see where we are at in terms of whether he has responded to your question.

MR. LANG: Because he is not addressing in any way my question, which is why I interrupted.

EXAMINER PARROT: We'll see if he gets there, and then we'll deal with it.

A. What I was addressing was the fact that in my question the analysis of Dr. Lesser -- my analysis of Dr. Lesser for the purpose of this testimony was around his treatment of the pool capacity payments and whether he was consistent with excluding of, you know, close to 900 million of plant in-service and also excluding I think the two gas units.

And so my analysis is really saying that if you are going to exclude all these costs post-2000, then you can't assume that the company AEP Ohio would still get the same $401 million payments from other pool members because the cost of those units also drives the pool capacity payments.

So on page 5 of my testimony, what I've

done is shown that if you just applied a mere ratio to the pool capacity payments, that it would be reduced from 125 million -- dollars per megawatt day down to $96.87 that's shown at the schedule at the top of page 5.

I don't get into the same rebuttal testimony arguments principally around the stranded cost issue. I think that's more of a legal issue, and I haven't done any analysis.

EXAMINER PARROT: All right. Did you want your question reread, Mr. Lang?

MR. LANG: My independent marketer question, yes, please.

(Record read.)

EXAMINER PARROT: And, Mr. Nelson, I'm going to ask you to answer the question, if you know.

THE WITNESS: One more time, that question.

(Record read.)

A. No, I don't see that question relating particularly to retirement decisions. I don't see that direct relationship.

Q. So a unit will remain in service if the market clearing price allows for recovery of avoided costs; is that correct?

A. There's a lot of issues around unit retirement. I wouldn't get it down to that -- that granule one concept that would produce retirement. I'm not following your question very well, I guess.

Q. Well, if the avoided costs that a unit receives are lower than the market clearing price, that allows the unit to recover some or all of its fixed costs; isn't that correct?

A. As I have explained, your use of avoided costs, are we talking about capacity? Energy? I need a little more explanation to answer that type of question. And what period are we talking about? Are we talking long term? Short term? Hourly? There's just --

Q. We are talking generally. Are these -- are these concepts that you don't understand?

A. I don't understand your question because it's too -- much too broad a question. I don't understand the concept. I don't think it's related. Retirement decisions are complex decisions. And they are not related to -- the market monitor doesn't dictate whether a unit is retired or not, if that's where you're headed.

Q. Does whether a unit recovers its costs dictate whether a unit is retired or not?

A. That would have a bearing long term. You would look at -- you know, the decision when to retire will be based on, you know, that analysis as well.

For example, if you had a unit that was needing a retrofit in say 2016, you may keep it running in the interim because you don't have that capital outlay but you would look at all the economics during that period. It wouldn't really be dependent necessarily on just PJM market or PJM market monitoring.

For example, you know, we have units operating in regulated states that are in PJM, but the PJM market doesn't determine whether those are getting cost recovery or not. For example, they make full embedded costs which would tidy -- you know, that's what our regulated states want. They don't want to transact with the market.

They are going to look at -- you are going to look at that analysis a little bit and perhaps other analyses, so there's too many nuances to this question. You can't make a blanket statement on retirements just based on what you've stated, so that's the best I can do with that type of very broad question.

Q. Let's try it another way. If for a particular unit AEP will not be recovering its full embedded costs for that unit for a one-year period, does that mean that AEP would shut down the plant?

A. Again, you would have to know what -- you wouldn't make a decision on one year. That's -- that would be foolish.

Q. Would you also have to know whether -- whether the company was recovering at least its variable costs or its avoided costs for that unit during that one-year period?

A. Well, normally what you'd do, the unit may or may not run that depending on its variable costs.

If the market energy price were sufficient, then it will run. If it's not sufficient, then it may not run but that wouldn't necessarily mean you would retire it either. Market prices can change pretty rapidly, so the fact of the matter is that you don't make a decision on any short-term parameters.

Q. So for that one-year period you could certainly have the situation where a plant is recovering its variable costs so that plant will run, but it may not recover its full embedded costs during that one-year period; is that fair?

A. Again, you would have to put it in context. Are you saying the only source of revenue for that plant is the PJM RPM market? That's not necessarily the story for our plants. You know, we do bilateral deals. We have wholesale contracts that are cost based. We have regulated states that are definitely cost based so the PJM RPM market has no bearing on that decision.

You have to talk about a particular unit. You would have to set up the regulatory parameters around that. You would have to see whether we have other options.

There are certain units, for example, we've had wholesale customers come back to us that used to shop in the market, wanted a cost-based formula contract, as Mr. Pearce has proposed here. We wouldn't be looking at that type of thing in isolation. You have to put more details around your question.

Q. All right. And I'm asking -- I am not just talking about PJM, I'm talking about all sources of revenue for a unit. If you are talking about all sources of revenue for a unit, that unit is recovering its variable costs or its avoided costs during that one-year period, the plant is going to run but it may not -- and it may run even if it's not going to recover its full embedded costs for that one-year period, correct?

MR. CONWAY: Your Honor, I object. This line of questioning has gone full circle. It has become repetitive. He has given the best answer that he can. I think it's time to move on to a different line of questions, so I object.

MR. LANG: Still looking for an answer to that question, your Honor.

EXAMINER PARROT: I am too. The objection is overruled.

THE WITNESS: Could you repeat the question?

EXAMINER PARROT: Could we reread the question, Karen?

(Record read.)

A. Yeah, again, I think I've answered it. Maybe a little too long winded but, yeah, that one-year time period wouldn't drive the retirement of -- recovering its variable cost of production. You might keep that plant in service but there's other considerations. I mean, it's not that simple.

Q. Thanks. And I would like to ask you with regard to Dr. Lesser's testimony -- by any chance do you have Dr. Lesser's testimony with you?

A. No, I do not.

MR. LANG: If I could just show him that.

Q. I want to show you table 3 from his testimony. Now, as part of your discussion of Dr. Lesser's testimony at pages 4 and 5 of your rebuttal testimony, did you review this section of his testimony that includes table 3?

A. Not very recently, no.

Q. Okay. The -- on line 1 of table 3, you see Dr. Lesser starts with the gross plant in service as of December 31, 2000?

A. Yes.

Q. Do you understand that that value includes all of the AEP Ohio existing generating units but would not include Darby and Waterford because they had not been acquired by that time period?

A. I don't see any math here to suggest that. If you're suggesting that he started with Dr. Pearce's numbers and then subtracted out something, if you could share with me the calculation and I could tie it to Dr. Pearce's work, I would be more comfortable because I don't know what this number is here.

Q. Okay. Do you know whether the total gross in service of 4.3 billion as of the end of 2000 is -- is accurate? Is that a number that you looked at?

A. If I looked at it, I haven't looked at it recently. I can't tell you whether that's accurate. It doesn't have the source, whether it's FERC Form 1 or whatever, in this particular document, so I just don't know. It's just a number.

Q. Actually the footnote says 2000 FERC Form 1 pages 204 to 207.

A. Oh, okay.

Q. So do you know whether that would include all of the AEP Ohio generating units existing as of December 31, 2000?

A. The FERC Form 1, those pages should include a list of those units that were on -- reported in those particular pages. Again, did he take the sum of the plant balances from those pages? Is that what you're representing? The dollars, that is.

Q. Just trying to find out what you know. Now, the -- you do agree that the rate base is determined by the -- well, let me ask first, you see that Dr. Lesser removes the accumulated depreciation from these plants in line 2 which left net generation plant in service on line 3?

A. Yeah, that's what this document represents.

Q. And with regard to net generation plant in service, the rate base is determined by the net generation in service taking into account depreciation, correct?

A. Can you repeat the question or reread it?

(Record read.)

A. Well, you are mixing a little bit concepts, rate base is a different number than net plant. Rate base includes other things besides net plant. That is a component of rate base.

Q. And Dr. Pearce himself -- Dr. Pearce also calculated a return on rate base using the net generating plant in service, correct?

A. As I said, including other things as well, that rate base is much broader than just net plant.

Q. Right.

A. There is that accumulated deferred federal income taxes and the like that are a major offset. We have working capital. I could go on, prepayments, et cetera. So, no, there wouldn't be a comparison between this number and a rate-based comparison in Dr. Pearce's testimony.

Q. I absolutely agree there is -- there is other elements but use the net number not the gross, correct?

A. For rate base calculation, yes, you use net, that's correct.

Q. Now, I want to take you through a hypothetical. Suppose AEP builds a new generating facility for $500 million that provides 100 megawatts of capacity. It goes in service next year, so it's a brand new plant. At that time there is no accumulated depreciation; is that correct?

A. Yes. It hasn't been depreciated.

Q. And in the hypothetical assuming there is a 20-year plant life and you have a straight-lined depreciation, that initial $500 million cost will be depreciated by 5 percent each year or $25 million. Do you follow that?

A. Well, there's tax depreciation, book depreciation.

Q. We are keeping this simple.

A. Keeping it simple, so you're saying 20-year life and you're going to apply a 5 percent depreciation rate, okay.

Q. Right, straight line.

A. Straight line.

Q. Okay. So do you follow?

A. Yes.

Q. Okay. So after 19 years, that -- you would then have 95 percent of the initial cost that would have been depreciated in that example, correct?

A. Yes, all things being equal if you haven't added additional capital during the course of that 20 years, so it's not a likely hypothetical.

Q. Now, as the plant depreciates over that 20-year period, does its capacity also decline?

A. It could, particularly if you just, on your example again, put capital back into that plant over 20 years, I would expect it probably would have declined.

Q. Okay. Now, let's assume that you are putting capital into the plant over that 20-year period.

A. How much capital are we putting into it? Another 20 million?

Q. Enough to keep it running.

A. All right.

Q. So if you are putting enough to -- in to keep it running, then you are still going to have capacity of 500 megawatts in that plant, correct? Or, I'm sorry, 100 megawatts in my example?

A. Yes, and then, of course, your original investment net book value is going to be increased by your investment to keep it running.

Q. So the -- you know, it's not going to have -- if you are starting with 100 megawatts of capacity, you are not going to have 95 megawatts in the second year and 90 megawatts in the third year, your capacity doesn't track your depreciation; isn't that fair?

A. Okay. I wouldn't think it would track your depreciation, no. It would be affected by a lot of other things.

Q. And you could also have a fully depreciated plant that is still -- still generating, still producing capacity; is that true?

A. That's correct.

Q. Now, on the top of page 5, you calculate what you call a ratio, and you start with -- the first line you start with annual production fixed costs of $1.1 billion; is that correct?

A. Yeah. That's from Dr. Lesser's table 7. That's his beginning costs on that table, line 1.

Q. And that's also from Dr. Pearce's testimony because both -- it's both in Dr. Pearce's testimony and the FERC Form 1; is that your understanding?

A. I believe that is in Dr. Pearce's beginning number. I'm not sure. There might be other things beyond these pages --

Q. Actually --

A. -- 204 and 207 of FERC Form 1. You would have to dig into that number to make sure it's consistent.

For example, you would have in this instance if this is -- is this Ohio Power? Dr. Lesser's table 7, it's the merged number, I believe.

Q. Yes.

A. So you would have Lawrenceburg, for example, would be included in this, and you would have OVEC so there is a lot of other things in that, production costs.

It should be able to, for the record, tie out that number and have a complete list of what's included in that beginning number so I don't think we should characterize it as a connection between this list of plants that we talked about earlier and this number.

I wouldn't want to go there. I suspect there's other -- other things in there that won't tie out exactly what's included in this number. It could be ascertained from Dr. Pearce's testimony. I'm assuming that he picked up that number from Dr. Pearce's testimony.

Q. All right. So that in terms of what the total production costs are on an annual basis that's in Dr. Pearce's testimony, as you stated, Dr. Pearce's testimony does list out what's included in that including close -- gross plant -- the plant in service, the operating and maintenance costs. As you note in your testimony, it also includes the capacity revenues where in Dr. Pearce's testimony I think he calls it the capacity sales for resale, right?

A. Again, I think I would have to look at the schedule, but I assume it includes all valid production costs that Dr. Pearce identified in his exhibits as demand related.

Q. Now, the second line that you show at the -- in your calculation, the top of page 5, is Dr. Lesser's revised annual production costs of approximately $260 million, so, again, that's a number that you've taken from his -- Dr. Lesser's table 7, correct?

A. That's correct.

Q. And that includes his $178 million adjustment for off-system energy sales, correct?

A. I don't have his table 7 in front of me, but I believe it does. But that could be verified by looking at table 7.

Q. Since here it says in your testimony you are trying to compare costs to costs, why did you include the off-system energy sales credit in your calculation?

A. I -- what I was comparing here is the total revised production costs of Dr. Lesser to what we think is the correct production costs and saying that production costs -- and that's demand-related production costs.

If they have gone down by this amount, I just said this as a simple ratio you would have to at least ratio down the 401 million pool credit because it's driven on the same type of costs. That pool credit that the other pool members paid to AEP Ohio is based on the sale set of costs so there is a credit in there of 401 million, so you can't take that full credit and knock out all the costs. That's very inconsistent.

Also, I am doing it for demonstration purposes, is showing a very large inconsistency. Now, whether it's adding back $97, $125 a megawatt day for that ratio or there may be some other precise number, but that's certainly in the ballpark. That's exactly what he's doing.

He's ignoring the fact that, you know, he is not excluding from the pool capacity payments all in plant costs. If he did that, then he would come up with a much lower pool capacity payment and that's the purpose of this exhibit.

In addition, he has removed megawatts associated with the gas units. Just removing those megawatts has an impact on the pool capacity payments that the other AEP pool members make so, again, this is just to recognize a very inconsistent approach and this is my attempt -- I am not going to do a full cost of service and so forth, but I think it's a valid comparison. I would say it's conservative.

Again, as I point out in lines 2 and 3, I am not getting into the fact here about a stranded costs calculation in and of itself. I think we can all brief that issue. It's a legal issue.

Q. So you say.

A. But you can't let stand the fact he

accepts $401 million in pool capacity credits, removes all this cost, remember, the pool capacity is a cost-based rate, removes all this cost, leaves standing 401 million in capacity payments. It's just an invalid -- it doesn't -- it shouldn't be done that way and that's the point of this exhibit.

MR. LANG: Could I have my question read back? I can't remember what it was.

(Record read.)

MR. LANG: Could I have the first sentence of his answer?

(Record read.)

MR. LANG: Your Honor, although I don't think that's responsive to the question, I move to strike the answer, the rest of his answer, as not responsive to the answer.

MR. CONWAY: Your Honor, I think it was actually directly on point. He asked the question how did you -- why did you reflect some credit in this -- in this calculation. Your Honor, I think he called it an off-system sales credit. And Mr. Nelson explained why he did what he did in this chart at the top of page 5, and I think it was both -- both responsive and helpful to the record.

MR. LANG: He certainly discussed

generally what he did at the top of page 5 but that wasn't my question.

MR. CONWAY: Your Honor --

EXAMINER PARROT: I'm going to allow the answer to stand, but I do believe we are still kind of waiting for an answer to the question, so if you could offer that, please.

THE WITNESS: Okay. I include it because I think the -- what I was getting to in this exhibit is he's come up with $78.53 for a dollar per megawatt day. You can see that in my table.

Dr. Pearce has come up with before losses 343.98, and alls I'm saying if you took that relationship. I'm not getting into the nuance of off-system sales margins.

Now, I think I understand maybe your point there maybe to be apples to apples a little more on this ratio. What I would suggest is we take off of Dr. Pearce's number the -- his proposed energy credit and then I would do that ratio and you would be -- then it would be a valid comparison, so.

Q. Well, the proper comparison would be to at least in your analysis put the 178 million, add that back to the 260 million, otherwise you're double counting; isn't that right?

A. I'm sorry, you said to add it back to what?
Q. To the 260 million revised production costs.
A. Again, I don't know if I would consider it double counting, but I think if you're suggesting a more valid ratio would be to take -- add back the off-system sales number because I do think this is a little bit of an inconsistency there between line 1 and line 17 so I would probably agree to -- to that to develop a ratio.
Again, it's the point that you have to adjust the full capacity. Certainly you can't come up with these type of numbers and not adjust the full capacity payment.
Q. Because you're treating Dr. Lesser's analysis as essentially having AEP Ohio having only 23 percent of its generating capacity so obviously there wouldn't be any off-system sales. It wouldn't be the energy credit. So even in what you're doing the ratio that you calculated is wrong.
A. Well, that brings up a good point because he has removed a couple of plants, you know, and he would have to remove off-system sales. Again, what I'm doing is saying that you can't remove all the

costs of these plants and say that the full capacity credit would remain the same for the 1 million credit. It would have to be reduced so it's an inconsistency. Whether I have a slight inconsistency here, perhaps, but I don't -- I think Dr. Lesser's inconsistency is way and above any inconsistency we have.

Again, I just treat his as simple ratio. I don't think the whole issue of removing all these plant costs post-2000 is valid.

Q. So 178 million is slight. It doesn't matter.

A. So you're suggesting that 259, add 278 to that, and then do the ratio? We could do the math if you like.

Q. Well, the calculation that you are doing, the ratio that you are coming up with, what you're showing here is that taking Dr. Lesser's approach, AEP would not have earned the $401 million capacity credit but would have only earned 23 percent of that credit.

A. That's an oversimplification. In fact, if we hadn't made any of this investment post-2000 in environment equipment, hadn't had Darby 1, I'm not sure there would be any full capacity payments because these plants would probably not be operating, probably would have been retired, so it's -- it's a little bit of a nuisance.

But I say at least if you can't -- the point is he's taking out so much plant and he's not adjusting a credit that's based on that plant. It's just -- it's just not a valid way to do it. It's just very inconsistent.

Q. And the plants are operating so over the last 10, 12 years, AEP Ohio has recovered its variable cost to continue operating those plants?

A. Yes, but they have been operating with those investments in the plants. They have been operating with the investment in Darby and Waterford so this is just a bizarre concept to me that we are somehow excluding the post-2001 plant and saying that has no effect on the operation of the AEP pool. It's a very one-sided treatment of this issue, so.

Q. So AEP has continued to get cost recovery, for example, for those environmental investments you have in EICCR for the last few years; is that correct?

A. And that's more to the point why this investment hadn't been stranded. The Commission has recognized these environmental investments, that's primarily what a lot of this plant is, were valid investments we were permitted to recover those investments through the EICCR and other mechanisms during the past 10 years and so -- so, again, I don't understand why we would now be excluding those.

In fact, if you look at the statute, the statute is very specific, even under an MRO you are allowed to recover environmental costs.

MR. RANDAZZO: I object.

A. And, you know, so I believe that, you know, this idea --

MR. LANG: If I could move to strike everything after "in fact," your Honors.

EXAMINER PARROT: Mr. Nelson.

MR. LANG: Mr. Nelson certainly likes to talk, but if he could be instructed to just answer the question, we could get through this this morning.

MR. CONWAY: And if Mr. Lang could refrain from interrupting the witness, I think he was explaining his understanding of the ESP framework.

THE WITNESS: Yes, because, Mr. Lang, I --

MR. LANG: Quiet, please.

MR. CONWAY: Mr. Lang.

EXAMINER SEE: Everybody, quiet.

EXAMINER PARROT: Everybody, yes, stop, please.

All right. I'm going to grant the notion to strike beginning with "in fact, if you look at the statute."

Let's move on, please.

MR. LANG: Thank you, your Honor.

EXAMINER PARROT: Next question.

Q. (By Mr. Lang) The -- under what you're showing here the reduction of the pool capacity credit would be because -- your understanding of Dr. Lesser's approach is that there is an equivalent reduction in AEP Ohio's installed capacity.

A. No. That's not completely true. It's not the installed capacity. It's the fact that the pool capacity payment is based on two things, it's the megawatts but it's also the cost. That's how you develop the pool capacity rate.

So if you take all those plants and the pool capacity rate could be greatly reduced, for example, it's -- it's probably in the neighborhood today of about $3 a megawatt and that's based on the original investment in these generating units. So if you remove 70 percent of that cost, then the rate obviously would come down 70 percent.

So you would be -- let's see, I might be able to do the math in my head, but you are going to get a very reduced capacity rate by taking out that plant cost so, again, you don't have to go to the megawatt issue. Alls you have to go to is the cost side. You wouldn't have pool capacity rate of $13 if you remove all the cost that underlies that rate.

Q. The cost is still there if it's been recovered, correct? You said the company doesn't have any stranded costs so that means you have recovered your costs, correct?

A. Well, that's not Dr. Lesser's position. He's taking out all that cost. Alls I'm saying, if you are going to take all that cost, you have to recalculate your pool capacity rate because pool capacity rates are based on those same costs. You can't disconnect those things, that's very inconsistent, that's the point of my testimony.

Q. That's your understanding of Dr. Lesser's testimony but, so just to be clear with this ratio of 23 percent, you are not saying that only 23 percent of the capacity exists under -- under your view of Dr. Lesser's analysis; the capacity is still there. You are focusing more on the costs rather than the actual existence of the units.

A. Yeah. In fact, what I'm doing more to rather than the megawatts, I am doing this ratio based on what costs remain and that goes to the rates, so I think this is valid saying you have to be consistent and reduce the pool capacity credit because you reduced the costs.

Q. So the -- will all the units operating -- all the units that were operating in 2001 that are included in Dr. Lesser's analysis will then transfer to AEP Generation Resources as part of the corporate separation?

A. Some units have retired since that time.

Q. Okay. So there is probably Sporn and then Conesville 3 might not be transferred?

A. I'm thinking of Conesville 1 and 2 were retired earlier so, yeah, there's been changes in the plant mix between 2000 and today. I can't tell you all the changes. Of course, there's been megawatts of change as well related to these plants when you put on scrubbers and so forth. You know, there is parasitic loads, megawatts have changed, so it's not a static from 2000 to --

Q. For the units retained by AEP Generation Resources after corporate separation, will those units continue to receive capacity -- continue to receive revenues from capacity and energy sales?

A. For the units transferred, I would hope they would, yes.

Q. And would you also hope that those revenues would continue to offset the capacity charge?

A. After corporate separation, there would be no capacity charge.

Q. Are you -- yeah, let's -- there wouldn't be any capacity charge after corporate separation and before June 1, 2015?

A. Not related to pool. The pool has been terminated on January 1, 2014, that's an assumption, and consistent with that we are corporately separating on the date, so the pool goes away at that time.

Q. So AEP Generation Resources would not be receiving capacity revenues?

A. I didn't say that. I think you were asking about the pool capacity revenues.

Q. Okay. And the -- well --

A. I would hope they would receive capacity.

Q. The capacity charge to CRES providers in this case would still be in place after corporate separation and through June 1, 2015, correct?

A. We hope so. They are using our capacity so we would expect to be compensated for that capacity, yes.

Q. And the revenue from that would still flow to AEP Generation Resources and cover the capacity costs, correct?

A. It depends on how the rate is set, whether it would cover the capacity costs. You know, if it's set at the proper rate, then it would recover at least some capacity costs. There may be other sources of capacity revenue, you would have to line up, you know, and see what all your sources of revenue are, but certainly that's why we are here, I think, is to figure out what that capacity charge should be.

Q. Now, you had referred earlier to Dr. Lesser removing the Darby and Waterford units from his analysis because of post-2001. Are you aware that making the capacity credits adjustment to account for Dr. Lesser's removal of Darby and Waterford from his analysis results in a capacity charge of approximately $91 per megawatt day?

A. You would have to go through the math there. I am not sure if you're talking about pool capacity or what are you talking about?

Q. This -- the adjustment for the pool capacity for removing Darby and Waterford. Have you -- have you seen any analysis of that that if you do it just for Darby and Waterford, that that would result in his credit being -- his capacity charge being approximately $91 per megawatt day?

A. Not familiar with that but, you know, the other thing we talked about earlier was if you remove the costs, that affects the capacity receipts in the pool. If you remove megawatts, that also affects it.

For example, you know, in 2010, I believe AEP Ohio was selling about 2,500 megawatts under the pool. We were compensated $401 million. If you remove Darby and Waterford, they would be out of the pool megawatts that were sold so, and that's about -- I think we could look at your earlier exhibit and see what Darby and Waterford are. Let's call Darby about -- I am not going to do the exact math, but 400-some megawatts, and I think Waterford --

Q. I think Waterford is 810.

A. 810, yeah, so if you would add those two, you could see just the fact you removed megawatts would cut the pool capacity receipts in more than half, so.

And then, of course, the other part of it is the rate. The pool capacity works by the multiplication of how many megawatts you are buying as a pool member or selling as a pool member times the capacity rate. So in -- Dr. Lesser's kind of done two things. I'm being conservative in my 23.

He marked out the megawatts to be able to sell to other pool members by, let's call it 1,400 megawatts, and then he's knocked down the cost of the remaining units that would affect the rates, so it would be selling less megawatts at a much lower rate so you get very little pool capacity revenue.

Q. Did you say that if you removed Darby and Waterford, it would reduce the capacity equalization payments by half?

A. Just the megawatts sold. I was using that basis. I haven't done the math to say it -- but --

Q. So Darby and Waterford are half of the Ohio Power megawatts?

A. Half of the megawatts sold through the pool, and that's the way it works. You have to understand the pool calculation which I could take you there, if you would like. But you're only looking at the incremental. They are not selling -- in the pool they are not selling -- they are only selling 2,500 megawatts to sister companies, I believe, around that number, in 2010. So I'm using that. They are not selling the full megawatt load.

Q. So you're saying half -- half of the 2,500 megawatts sold in the pool is -- just happens to come from Waterford and Darby?

A. No, that's not the way it works. You have to determine the capacity obligation of each member, and you include your total megawatts in that. You apply the MLR to determine what your obligation is and then you compare that to what your actual megawatts are and the difference is what you sell in the pool.

So it's a blend of all your megawatts. But if you took out -- my point is if you took out 1,400 megawatts of Ohio Power just through the math of the pool, not long by 2,500 megawatts any longer, they would be long by 1,100 megawatts in my example, so that would reduce it alone and that's why, you know, I think anybody that's followed the pool, you know, there's been arguments about certain plants in different jurisdictions, and it affects the pool capacity settlement.

If you would like, I think I have some documents I could walk you through how the pool obligation for capacity is established, but.

Q. I think I'll pass on that, but thank you for the offer.

Now, on page 5 of your testimony, you also referred to trapped costs. And at the top of page 6, you list different categories of costs that are not in Mr. Smith's testimony. Do you agree that these same categories of costs are not in Dr. Pearce's testimony that is part of his capacity charge calculation?

A. Well, with the caveat they shouldn't be in the demand side of the equation. These are energy costs, so.

Q. Right.

A. Dr. Pearce's calculation --

Q. If we can get to that, please, just answer my question. These are very simple.

The -- these costs because -- because they are energy costs, not demand, they are not in Dr. Pearce's calculation; is that right?

A. They are not in his calculation of the demand component. He has put out an energy credit, and they would be consistent in the energy credit.

Q. So he treated them as energy related, and they are not fixed costs, correct?

A. He treated them as energy related and the point is that in staff's testimony of Smith -- Witness Smith accepted Dr. Pearce's assignment of these costs to energy but then Witness Harter did not. He admitted he did not pick them up as reducing the energy margin credit.

Q. So Mr. Smith gave them the same treatment as Dr. Pearce, correct?

A. That's correct.

Q. Okay. Does AEP Ohio recover part of its fixed costs through its margin on energy sales to SSO customers?

A. I'm sorry, I can't drink and think at the same time.

Q. I'll ask the question again. Does AEP Ohio recover part of its fixed costs through its margin on energy sales to SSO customers?

A. As we've talked about, I think at length in certain proceedings, maybe in this one as well, is that generally, no, they wouldn't be part of the energy or variable costs charged to SSO customers. I believe that's considered demand-relate cost that's recovered based on that.

Q. Does AEP recover parts of its fixed costs through its total generation-related charges to SSO customers?

A. In its total charges to SSO customers, yes, it would recover its fixed and variable costs. We would have -- since Ohio Power is earning 10 to 11 percent, that is evidence they are recovering their full costs.

Q. Do you agree that AEP Ohio should not double recover those costs, once from SSO customers and once from CRES providers?

A. Yeah, I wouldn't -- I don't think we are seeking any sort of double recovery of costs.

Q. Good. Now, do you agree that any sales to standard service offer customers are not MLRed under the pool agreement?

A. Yes. Retail rates have nothing to do with pool agreement and there would be no MLRing of internal load.

Q. So only the off-system sales are MLRed?

A. Not only the off-system sales are MLRed.

Q. Now, I believe you were here yesterday for the discussion of the AEP SC employee Mr. Weaver and his -- and his testimony in Kentucky? Were you here for that?

A. Yes, I was.

Q. And you understand that Mr. Weaver's

group, the group that he is managing director of, provides forecasts of commodity pricing to all of the AEP electric operating companies.

A. I believe that's correct. I suspect that was in his testimony. I know that department was separate at one point from Mr. Weaver's department, but I think it's probably under him at this time. I think that's true. Did you pull that from his testimony or a document?

Q. I believe that was in his testimony.

A. Okay. Then I'll accept it.

Q. You are agreeing it's right, okay.

A. Yeah.

Q. You -- now, in this case you provided data to Mr. Meehan for his use, correct?

A. That's correct.

Q. Is it fair to say you did not provide any forecasting data from Mr. Weaver's group to Mr. Meehan?

A. No, that's not correct.

Q. Okay. What specific -- what specific forecasting data did you provide to Mr. Meehan that would have been generated by Mr. Weaver's group?

A. All of it.

Q. Then what specific forecasting data did you provide to Mr. Meehan?

A. If you could give me just a minute to get organized, I know I have a list here.

Okay. I can go down through the list of information we provided. A list of current Ohio units, including Amos 3, Mitchell, Hydro --

Q. Mr. Nelson, before you go through the list, I was looking particularly for forecast information, so like an existing unit would not be included in part of that.

A. If you're planning to retire units and so forth, I think it's important to -- in your forecast to list the units you think are in operation so I disagree. It would be part of the forecast. That's kind of critical to the forecast, knowing which units are going to be there and operating and make sure we have the complete list of units.

Q. All right.

A. Okay. So it would be detailed unit location; fuel type; in-service date; mode operation; base intermediate or peaking; projected unit retirement date for units that retired during the study period as you just said; projected unit minimum capacity by month; projected unit maximum unit capacity by month.

Projected unit average heat rate, BTU per kWh; projected unit average dispatch cost in dollars per megawatt hour; projected unit SO2 rates, NOx rates, CO-2, and mercury; projected unit fuel and fuel handling costs; projected variable O&M, one-half maintenance and consumable costs; projected Ohio hydro unit generation; projected unit planned outage maintenance dates.

Projected unit equivalent unplanned outage rate, forced outages; OVEC purchased data by sub-period, weekday, weeknight, weekend, et cetera; input/output curves; quadratic heat rate curve, I won't give you the formula but.

Q. I appreciate that.

A. I do too. You might follow up on some math questions for me. Unit minimum up and down time, and that's minimum time a unit is projected to run; minimum time a unit is out of service when it's forced offline; unit startup costs; unit percent of fuel used for startup when a base unit has been offline, percent coal versus percent oil.

Projected coal delivery data to each unit, which includes delivered tons, dollars, sulfur, percent and coal in cents per million BTU; forward gas prices; Henry Hub price plus transportation adders. That one I'm not sure if Mr. Meehan used our Henry Hub information or had his own. Obviously what we're providing is the cost side of the equation. He went ahead and dispatched them against the forward strips.

Projected emission costs dollar per dollar SO2 and NOx by state, 2009-2011 historical Ohio unit and their service hours; historical performance data, 2007-2011 historical Ohio data; document describes AEP's area security and extended start constraints. I think that's -- we may have provided some other things, but I think that covers it.

Q. Do you know whether the forward gas prices that were provided to Mr. Meehan were the same as in the testimony of Mr. Weaver that we saw yesterday?

A. I don't know. I didn't look at those forward gas prices.

Q. Other than the forward gas prices --

A. I would add I suspect they were more recent for the current forecast.

Q. Other than the forward base prices, do you know whether there were any other commodity price forecasts in what was provided to Mr. Meehan?

A. Yes. I just went through the list and commodities I would consider consumables are like things used to -- for environmental compliance we call those commodities. We also -- you know, those types of things, yes, they would be provided, anything to operate the unit.

Q. So the costs going into the unit, there would be some forecasts of the -- of the costs for those commodities like, as you said, the arena?

A. Yes. Those types of things would be in there.

Q. And then --

A. Of course, the tons emitted of SO2 and NOx and so forth would affect commodity prices and so forth.

Q. You said Mr. Meehan dispatched against the forward strips.

A. I think that's the way I understand it. I would prefer if you ask him. I hate to muddy the record with an incorrect statement, but I am sure he can answer how he used our data.

Q. And I just wanted to clarify, you referred to forward strips. You are referring to forward energy prices?

A. Yes. I think the discussion yesterday was around forward energy prices that are at the market is transacting at today but, again, I think all of this is better asked of Witness Meehan.

Q. Were any of AEP Service Corp.'s internal forecast of energy prices provided to Mr. Meehan?

A. No. We wouldn't have. Generally we would use the same -- for short-term financial forecasts, we would use the same methodology, I would think, that Mr. Meehan uses.

Q. If the Commission adopts an RPM-based capacity charge in this case, we wouldn't have to speculate about the proper energy credit or speculate about shopping levels; isn't that true?

THE WITNESS: I'm sorry, could I have that repeated.

(Record read.)

A. I guess if they -- the Commission determines something, we wouldn't have to speculate but that wouldn't necessarily mean that's the right answer other than, you know, we would still have the FERC proceeding to pursue whatever we needed to do if we felt that the decision here wasn't -- we were going to have to protect our rights, and we have rights under the FERC jurisdiction.

Q. So it wouldn't be speculating about

forward energy prices, but we would be fighting in the -- fighting it out at FERC is what you're saying.

A. Perhaps. I expect the Commission will give us a demand charge or a capacity charge that's compensatory to us so I don't need to speculate. I think we'll get a fair treatment from this Commission.

MR. LANG: Thank you, Mr. Nelson.

And thank you, your Honors.

EXAMINER PARROT: Mr. Jones.

MR. JONES: Thank you, your Honors.

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CROSS-EXAMINATION

By Mr. Jones:

Q. Mr. Nelson, are you familiar with AEP's AuroraXMP model?

A. Not -- I wouldn't call myself familiar with it. I know we -- Fundamentals Group does have that model. We run several different models for different purposes.

Q. Okay. So the AEP Fundamentals Group, they do use the AuroraXMP model; is that correct?

A. The Fundamentals Group I do believe uses that model, yes.

Q. Okay. Is the AEP Fundamentals Group the only group within AEP that uses Aurora?

A. I'm not positive. They are the one that comes to mind as a user of it. I'm not sure if any other sections do use that Aurora model.

Q. Okay. Have you personally worked with AEP Fundamentals Group on the Aurora modeling?

A. Personally worked on it, no.

Q. Have you had any discussions with members of that group as to that modeling?

A. I was on the same floor with that group and Mr. Weaver's group, and I understood what that group did, you know, from my interaction. I don't think I ever particularly discussed the workings of the Aurora model with them, no.

Q. Does Mr. Weaver -- is he the head of that group?

A. He is the head of Resource Planning, and I think the question I had from Mr. Lang indicated I think that Fundamentals Group is under Mr. Weaver.

Q. Okay. Were you involved in Kentucky Power's case regarding the scrubber retrofit on Big Sandy?

A. No, I was not.

Q. But you are familiar with the Kentucky --

the Kentucky case?

A. I'm familiar with it on a general level, yes.

Q. And are you familiar with how the AEP Fundamentals Group used your model in support of that case?

A. I think it was for as -- I ran into Scott Weaver on the way out this morning and I think it was used for Monte Carlo simulation. I think the prime tool as I recall was Strategist so it was kind of a check against Strategist and some other modeling but I think they may have used it for Monte Carlo simulation.

Q. And when they used the Aurora model in the Kentucky case, did they use the zonal or the nodal version?

A. I don't know.

Q. Did you ask the AEP -- the Fundamentals Group to support their work in developing the capacity rates for CRES in this case?

A. No, I wouldn't have done that. I wouldn't have seen any reason to do that.

Q. You didn't have them do any modeling as a test for your methodology?

A. We didn't need to test our methodology because, as our testimony indicates, it was based on a 2010 test period, and you don't have to get into forecasts of margins when you use 2010, you know, your margins and that's why I think 2010 as a test period is consistent across the board as we talked about trap costs and so forth.

So we didn't use a forecast in our calculation of a proper CRES capacity charge. We used a historic period which has a lot of benefits, but I'll stop there.

Q. So it's your testimony, Mr. Nelson, that AEP did no analysis with its own Aurora model, direct rebuttal aspects of this case?

A. The rebuttal aspects we got into in that situation put us into the criticism of staff's method. Of course, the staff's consultants had used Aurora, so we looked at Aurora but I can't tell you whether we did it.

We -- you know, it was a very short-time period so I am not sure we would have been able to do any Aurora modeling that would be reliable in that time period and, of course, as we talked before, we wouldn't use Aurora for that short-term analysis. We don't -- for financial forecasts and whatever, we don't use that.

What Witness Meehan has done is consistent with the methodology we would use in our short-term financial forecasting so I just wanted to give you the complete picture on that.

Q. Yeah. I'm trying to understand your testimony, Mr. Nelson. I wasn't clear. Was there Aurora modeling done in prep --

A. My --

Q. Wait.

-- in preparation for the rebuttal case in Mr. Meehan's testimony?

A. I'm not sure. I'm not sure what they did. I know we reviewed the model, as you could probably tell from our cross and so forth, to see, you know, whether some of the things that the staff consultants talked about, how they used the model, so we did talk to our Fundamentals Group and, you know, developed a line of cross based on that.

You know, they wouldn't use it for the purposes that the staff consultants used it in developing that line of cross. Whether we actually ran a model to validate something, I don't know personally, and I wouldn't expect that we would, you know, do that other than to test staff's methodology, but I think what we focused more on was understanding nodal versus zonal, talking to folks that use it.

Our folks have -- I would say we have a lot more experience in the use of that model. We have a lot more people dedicated to that model so we just wanted to make sure listening to -- I'm sympathetic to the staff consultants in the sense they had a short time, they hadn't used the model that long to develop this, just to see how they used the model and whether it was appropriate for this application. But whether we actually produced some result, I can't tell you.

Q. So it sounds like the model was run for purposes of trying to address criticisms of staff's --

A. As I said, I don't -- I don't -- I am not aware of it but I can't say. I just wasn't in all the conversations. Again, I don't want to repeat myself, but we did it really to talk to the modelers to say how would you use this model, what are the nos, and how the consultants of staff, EVA, what was their flaws, but it wasn't done for purposes of validating the proper energy credit, if that's your question. I think what --

Q. How do you know that if you are not sure whether or not the modeling was done or not? You sound like you are sure about --

A. Well, I can tell you I am sure of that because what we've chosen to do is what Witness Meehan has done. That's -- that's what we think is the proper method to look at. If you are going to use a forecast other than the historic period I've talked about, then we think the way that our Witness Meehan has done it is the proper way for a short-term period like this.

Q. Mr. Nelson, you helped prepare Mr. Meehan, haven't you, for his testimony in this case?

A. I provided -- facilitated getting him the cost data that he needed.

Q. Well, it's fair to say you are in the inner circle that helped prepare him for this case; isn't that correct?

A. I'm not sure I characterize my role as "preparing" him. I was pretty swamped with getting my own testimony done. We all were under a short timeframe. I had been on calls as a group, but I wouldn't -- I wouldn't say that I -- I don't know that he needed much preparation from me.

Q. But you did help prepare him, correct?

A. In the sense that I provided cost data, was on certain phone calls, but if that's considered preparation, I would accept that.

Q. How many conversations have you had with him in regards to this case?

A. Well, I have been in testimony review sessions where we are working on drafts and we had several of those. I would say -- I wasn't on all the calls with Mr. Meehan. I was in limited calls but where we might review our testimonies to make sure we are consistent, how we are handing off using things, I was in phone calls, probably I'm guessing about five conference calls.

Q. In the last week or how long?

A. During the course of since we retained him to start looking at this issue. We -- we met when he came in last night and with the attorneys and all and had a meeting there. That was in addition to the phone calls that we had.

Q. And when did you retain Mr. Meehan?

A. That would be a better question for Mr. Meehan. I'm not sure of the exact date.

Q. Well, when was the first conversation you had with Mr. Meehan?

MR. CONWAY: Your Honor, we are treading awfully close to the company's work product and communications supervised by counsel. I just want to alert counsel for the staff that I'm close to an objection.

MR. JONES: Your Honor, I have gone nowhere near any communications other than asking when the communication occurred and have not asked for the content of any conversation but when the first contact and communication occurred.

EXAMINER PARROT: Mr. Nelson, you may answer the question.

A. Mr. Jones, my memory isn't real good on dates, and such but I could probably blend it in some sort of context for you. It was subsequent to Mr. Harter's testimony. I think, you know, probably a few days after that, that would probably be the first time I was involved.

Q. And who in your group would know whether Mr. Meehan ran the Aurora model for purposes of preparation for his testimony?

A. Mr. Meehan would tell you if he ran it. I think that's the best source.

Q. How about besides him?

A. Besides him?

Q. Yes.

A. I don't know. Our attorneys or someone might.

Q. Okay. I want to go back to the Kentucky Power case application. Are you familiar with the fuel cost assumptions that AEP used to evaluate the scrubber options in that case?

A. I'm not familiar with the particulars of that case, as I mentioned.

Q. Well, do you know if the fuel cost assumptions that were developed for that case were based upon Kentucky Power Form 1 fuel costs for 2010?

A. I wouldn't think it would be based on FERC Form 1 in 2010. That isn't a period in the study period. What they would probably do is use the most exact information they had as a -- as I just went through a list of stuff we typically have. It's very exact.

We look at our units, this is how we operate our business. We have to know how our units operate and so forth, so in the first -- in the short-term we would have used actual known contracts and so forth, I believe.

Now, and then in longer term you get into, you know, if you are looking at 30 years, you start to use more fundamental information because there you kind of get to, you know, a forecast that has gas prices, for example, on out that's not readily available, and it's not based on, you know, contracts that you have in place for your units.

Q. Well --

A. My point is, sorry, but I was trying -- it may be a mix of things. It may be what you know in the short-term particular to your units, and then for longer-term purposes you may rely on a fundamentals-type analysis.

Q. Well, did AEP use forward-price curves or forecasts for that scenario in that case?

A. I don't know what they used. One thing I could add, though, is forward-price curves wouldn't be available for that period so they wouldn't have used forward-price curve for the whole study period.

As some would mention, the scrubber's going in 2016 so they are faced with using longer-term forecasts, you don't have a forward strip. I think they generate about three years, as I recall, that you could ask Witness Meehan on that.

Q. Go back a second. For the engagement for Mr. Meehan, how was that approached? Was he asked to develop an energy credit, or was he simply asked to critique staff's testimony?

A. I'm not sure what his contract was.

That's a question for the folks that dealt directly on that contract.

Q. And what are all the inputs you provided Mr. Meehan?

A. It's the list I read earlier. I could go back through it if you would like.

Q. The same list.

A. The same list.

Q. And did you provide coal --

A. Now, let me caveat, I don't do all this -- this work. I facilitated in getting the information from Mr. Weaver's group, Resource Planning, to Mr. Meehan. I knew where to go for this data and that was primarily my role, was facilitating that.

Q. Did you provide Mr. Meehan coal prices that are based upon 2011 Form 1 data?

A. No. As I mentioned before, this is a -- Mr. Meehan is attempting to duplicate what the staff witnesses have done and it's a forecast period so you use forecasted coal prices. All of these things I mentioned here in my list were forecast items. But they would be based on actual contract information so we know, for example, you know, what the coal contracts are into all our plants and would use the best available information on -- on those units.

Q. How about the natural gas price, do you use a forward-price curve?

A. Natural gas as far as our units, remember, I'm on the cost side. I want to differentiate. I'm not providing forecast of natural gas.

Q. Sure.

A. I think we did, as I mentioned, but I'm not sure if he used it or not. We provided what we used there. But on the cost side we look at our particular units and try to provide the appropriate gas costs for those units. Those units would be Darby, Waterford, Lawrenceburg and such.

Typically I don't think we have as much contract commitment on gas units so I think it tends to be more spot, but I could be wrong in that area.

Q. What did you tell Mr. Meehan to assume about the CSAPR, that would be the Cross States Air Pollution Rule, what application, if any, that had?

A. I wouldn't think we would have to tell him about the interpretation of CSAPR and so forth. That would be driving our costs. We have another group that, you know, we look at all those regulations obviously.

If you followed our press releases, these regulations are no more -- to AEP they are the most important thing. We are the -- probably the companies affected most by these things so we have quite a team that looks at all those issues around, you know, what's the prognosis for CSAPR, MATs, all these environmental regulations and then our forecasted information and projections is based on the best -- our best estimates of what rules will be in place.

We -- obviously you can model the rules in place today but we have -- we have to look forward and assume, as CSAPR is stayed currently, going into effect during this period and we make assumptions there and, of course, as I mentioned, the same data that all these costs would be used for our financial forecasting purposes as well, so we want to make sure it's as accurate as possible, takes into account everything we know about environmental regulations and everything we know about how our plants will operate under those environmental regulations.

Q. Specifically asked for CSAPR and it sounds like you didn't have any conversation on CSAPR.

A. As I said, we wouldn't need to have any.

What Mr. Meehan is using is a strip and I think as Mr. -- Witness Allen mentioned yesterday, the market makes its own assumptions about CSAPR and how it might affect market prices because what Mr. Meehan is doing is dispatching our units against a market price and in his modeling -- so I don't know that he -- you could -- I think, again, I would ask him the question about any conversations about CSAPR that we've had, but.

Q. But your answer is no as it concerns you, right?

A. As I said, we -- we may have had conversations about CSAPR, but we reflected CSAPR in the cost data we had, our best estimate of what CSAPR is, so hopefully that answers your question, but if not.

Q. So you did have the discussion with him about CSAPR?

A. I suspect that CSAPR came up because of the staff testimony around, you know, them modeling -- I'm sorry, not them but your witnesses' modeling environmental regulations and I think Witness Medine talked about CSAPR and so forth so he may have wanted to check what's AEP's assumptions on CSAPR and so forth.

But, again, I don't want to -- you know, that's kind of my knowledge on this issue. I think it's relevant. He probably would be interested in it. It's something we have to address because I think the staff witnesses have raised environmental regulations, but I can tell you I was telling you what we've provided in our data, what we've looked at, and why we think the data that we've provided is correct with respect to known environmental regulations for our units and future regulations.

Q. So to your knowledge then Mr. Meehan then included CSAPR in his analysis is what you're saying, correct?

A. I would ask him. He is going to be up next. It just -- I think it's just more fair to him and to me to just ask him what he did with CSAPR. And if I've mischaracterized anything in what he's done with it, he can correct. And I would accept that correction. I'm not going to tell you I know everything he did.

Q. Okay. And did you also give him assumptions for emission allowances?

A. In the data we provided we would have the operation of our plants under, you know, certain assumptions, so if that's your question, you know, we put out what the various units emit in tons of, you know, various pollutants and then that's factored into our SO2 costs we have for these units, and so, yes, in the cost data we've taken into account all those environmental regulations and the repercussions on costs for all our units because it's critical to us, AEP, as being, you know, a large coal-fired company.

And as you've seen, we've lobbied heavily in all the environmental regulations that have been promulgated to make sure that, you know, we understand those regulations and that we can influence them and not burden our customers with costs.

Q. What specifically did you have him assume?

A. Again, I'm not sure we had him assume anything. We provided costs based on a set of assumptions. He didn't need to assume anything. I don't believe the assumptions affect our costs that we provided, but you can ask him whether any -- he's made any assumptions around these things, but from my perspective, I think the assumptions are made in our cost data, and then he uses our cost data.

Q. What, if anything, did you have

Mr. Meehan assume in regards to electricity demand growth?

A. Again, I didn't see any list of assumptions that we provided. I only know the list I read earlier.

Q. Okay. And did Mr. Meehan do any modeling runs with Pro-Mod?

A. I don't believe so. Again, you can ask him. I don't believe so.

Q. Was that a discussion between you and him at all?

A. No. Again, I wouldn't necessarily use -- Pro-Mod is a cost -- the cost side of the equation so, again, all this data I just talked about is what Pro-Mod does. It's a production cost model. It doesn't forecast market prices and such. I just want to clear that up.

So this -- this data that we're using here would be used in Pro-Mod. It's basically the -- Scott Weaver is the keeper of Pro-Mod and this is the data that comes from him, and it would be consistent with the Pro-Mod cost production model.

Q. Okay. In the group that Mr. Meehan is with, NERA, N-E-R-A, are they a licensee of Aurora?

MR. CONWAY: Could I have that question

reread, your Honor?

(Record read.)

A. I don't know. You can ask Mr. Meehan.

Q. Mr. Nelson, what is your understanding of how staff developed its estimate of off-system sales?

A. My understanding is they compared the total generation of the AEP Ohio fleet to the load of AEP Ohio. I'm not sure -- I don't believe they did anything with the load of Wheeling, but I'm not positive. I suspect -- I believe they didn't.

And then what you do is you do an hourly analysis and see if you had excess above the load to sell into the off-system sales market. So the generation would be dispatched against a market price, and then you determine whether you have excess -- or off-system sales to make in that particular hour.

Q. Okay. And, Mr. Nelson, is it your testimony it is an error that the amount of shopping affects energy credits pursuant to staff's analysis?

A. I wouldn't necessarily call that one fact an error. I think it's problematic in this proceeding because from a cost-of-service point of view, and I did a cost-of-service modeling, you might -- you know, it could be a reasonable approach but the problem is that normally you do that type of analysis with a stable jurisdictional allocation.

For example, if you knew Virginia and West Virginia, I'm going -- something Mr. Kurtz brought up but, you know, they have a juridictional percent that's rather stable. You can use another method there; however, if your shopping is a variable and if staff, for example, you know, came up with a method where we were going to track actual shopping, you know, monthly or something, then it might -- might be better suited -- I don't necessarily agree with other parts of staff.

I don't want to imply that if we fix kind of the variables of shopping issues, that I would agree with how they've treated, for example, giving the margins on our retail load to CRES providers. That doesn't make sense for a lot of reasons. But just the fact that your original question whether it was an error, I don't want to go that far. I just don't think it's well-suited to this process here.

Q. Okay. The energy credit is affected by the amount of shopping in staff's analysis due to the application of the MLR; is that correct?

A. Yes. It may be helpful on page 9 of my testimony there is a diagram there that shows, I believe, how staff had, you know, modeled their energy credit and I think this was presented to Staff Witness Medine and she -- she agreed with some things other than I think the 26 percent that's in the second box.

I changed that to up to 26 percent. I think that would be consistent with her response there. But, yes, it's a limited -- I will call it a limited application of the MLR just because it just fixes the shopping at 26 percent, establishes an off-system sales, and then applies the MLR to that fixed number.

So they did use -- the staff did use the MLR to some extent. It's just -- it's just not -- it's limited and I don't think it's proper. And obviously I have a lot of problem with providing our retail margins to CRES providers. That's -- that's a little beyond me why we would be doing that but. I hope I answered your question.

Q. So the MLR is a factor that's the cause of that result; is that correct?

A. I'm sorry, I didn't understand that question.

Q. The cause of affecting the energy credit as to the amount of shopping.

A. In the staff's modeling, it would affect the energy credit. In fact, in the last page of my testimony I can give you the effects of the MLR.

Q. That's okay. You answered my question. Thank you.

Mr. Nelson, if the level of switching increases and a larger portion of AEP Ohio's energy margins are redistributed to the AEP pool, will the plant be more or less available to AEP Ohio?

A. Mr. Jones, I don't see a direct connection there. It's kind of a broad question. Maybe you could rephrase or ask me once again.

Q. Well, I am asking if the plant would be more or less valuable to AEP Ohio if there's increased switching and a larger portion of AEP's energy margins are redistributed to the AEP pool.

A. You have got to remember the pool has been in place a long time, and it's got all different facets to it. We're talking primarily about MLRing of off-system sales but there's the capacity credit. There's also sales of primary energy so I don't know that following the pool changes anything for AEP Ohio.

What we're actually suggesting is that the pool should be followed because it is a FERC contract and we can't pick and choose. We would be in a lot of trouble if each state got to pick the part of the pool they liked and at the expense of another state.

So I hope that answers your question. The pool is a fundamental underlying concept so I don't think it affects valuation one way or another. What we're suggesting is that when you do your energy credit, that you should be true to the pool operation.

Q. So let me understand, the value of the AEP assets, is it dependent on the level of switching or not?

MR. RANDAZZO: May I ask when you say "assets" are here, are you talking about generating assets?

MR. JONES: Generating assets.

MR. RANDAZZO: Thank you.

A. Again, I just -- I don't know how to answer that question. I don't understand the premise.

Q. Okay. As part of the pool agreement, is AEP Ohio due approximately 40 percent of the off-system sales margins from Appalachian Power, Kentucky Power, and Indiana and Michigan?

A. Yes, they receive that.

Q. They receive the 40 percent from the other members of the pool?

A. Yes. All off-system sales are shared. It can be generated from any company. They would get 40 percent of I&M's, 40 percent of -- it would be summed and then they get 40 percent share, whoever makes the off-system sale.

Q. Right. Do you include this revenue stream in your analysis of the energy credit?

A. In the 2010 data we use, yes, all of those transactions would be -- all those transactions would be reflected and, again, that's one of the reasons I think that we should be consistent and use Dr. Pearce's work. It's based on a complete set of information, complete set of data. It fully reflects all transactions, off-system sales sharing, and all -- and it's accounted for every cost in 2010. So it is a test to your concept.

Q. Mr. Nelson, did staff include this revenue stream for the analysis of the energy credit?

A. Not that I can see directly. As I point out in my testimony, I'm not sure exactly what the staff is trying to model. They've done some things that I -- I didn't know if it was post-corporate separation and pool termination view because you do have the transfer of Amos and Mitchell, for example, out of there.

Today Amos and Mitchell are part of AEP Ohio so it's kind of a -- but you do apply the MLR, as I said, in a limited fashion as well, so you have got a little bit of a hodgepodge there. I did not see anything particular to the item you mentioned in your work.

Q. Mr. Nelson, the fact that staff did not include this revenue stream in its analysis of the energy credit, doesn't that make staff's analysis conservative?

A. No, because I think there's a lot of other issues that you would need to consider. I would first have to know is the pool operating or not because, you know, they also have the full pool capacity credit in there on Mr. Smith's work so he's got the $400 million credit in there so it's not -- the staff is not quite consistent.

And by the way, I just want to point out when we review Mr. Meehan's work, it doesn't have the pool layer on it either. It's kind of a no-pool view I think, to be consistent with the methodology that the staff witnesses have done, so I just want to be clear on that.

But if you are using 2010, all of those transactions that happened, so you're assured of not missing anything if you use a test period like 2010 and account for all -- everything in the FERC Form 1 that I believe Dr. Pearce's formula has done.

MR. JONES: Your Honor, I would ask to strike everything after his answer "No." He answered the question. The rest of it is not responsive to my question.

MR. CONWAY: Your Honor, I think he was explaining his answer. He's entitled to do that, why he didn't agree, it was conservative, staff's approach was conservative, as a result of the presumption or hypothetical that Mr. Jones presented to him. He explained it wasn't conservative and he gave the reason why it was not conservative, why there are other errors.

MR. JONES: Your Honor, he went way beyond the scope of the question. It wasn't relevant to the question.

EXAMINER PARROT: The motion to strike is denied.

Q. (By Mr. Jones) Mr. Nelson, is it your understanding Amos and Mitchell, capacity generation were not included in either of the capacity or energy-critical calculations for staff's analysis?

A. That's correct.

Q. Okay. And in regard to how staff determined revenues from off-system sales, is your criticism -- is it your criticism in how the off-system sales were calculated or how the MLR was applied by staff?

A. Well, I would have a criticism in the amount of off-system sales to begin with because I think staff has left off Wheeling, so they are overstated. I don't think it's so much around off-system sales. My criticism is around the sharing of the nonshopping margins to CRES providers.

I think they've, you know, applied the right MLR as I could tell to their number. Again, their number might be overstated a little bit because of Wheeling which is a firm wholesale customer. That's cost-based rates so there wouldn't be margins available to share for that account but -- or for that customer, I'm sorry, not account.

Q. Okay. So it's limited to nonshopping customers; is that your answer, that criticism?

A. Limited, I, of course, address the methodology. As far as the margins produced though, we obviously have disagreements there which I think both Witness Allen and Meehan have addressed, so. But as far as applying, you know, if you've probably identified off-system sales, setting aside the Wheeling issue, and you've applied a 40 percent MLR to that off-system sale, you know, that sounds correct, that statement.

Q. Okay. Thank you. All right. What needs to occur from a regulatory perspective for the pool agreement to expire? Do you know?

A. I believe that we will need approval of the FERC. There's more involved than just getting that approval to just terminate it as far as working with our states, but I think it ultimately comes down to needing FERC approval to terminate that contract.

Q. And how about each state effected by the pool, would it need approval there too?

A. As far as the pool is concerned, no, as far as termination of it.

Q. Okay. And if the approvals you need to obtain by the end of 2013 does not occur, does the pool agreement continue until they do?

A. Yeah, I would think if the FERC hasn't approved the termination of the pool, the pool agreement would continue.

Q. So would you agree, Mr. Nelson, there is a level of uncertainty associated with whether or not AEP Ohio is going to be granted that pool termination in that timeframe of January 1, 2014?

A. There's always a level of uncertainty. The only thing I would add is Entergy Corporation went through a similar proceeding, they have a pool very similar to ours, and had provided notice in their docket.

And the FERC is pretty clear that, you know, we have the right to terminate that pool and, of course, we provided the proper three-year notice for termination of the pool so I would think we are probably on pretty solid ground as far as the termination.

Now, we'd also be concerned about our states, you know, and how that might affect them and if, you know, we are going to be talking to all the states to make sure that, you know, that date, you know, so I can't say it doesn't slip because we still have the choice to terminate, when we pull the trigger, but I would say that, you know, so there is uncertainty.

Q. Mr. Nelson, the outcome post the pool agreement, AEP Ohio has suggested that it could include transfers and bilateral agreements; is that correct?

A. Post-pool termination? Post-pool as far as meeting the needs of the other pool members, you know, we have a plan out there which has been laid out, and I think it's in my ESP testimony in the corporate separation testimony here but not in this case but in the other filings that are concurrent to this case.

And our plan, of course, is to transfer Amos and Mitchell to Appalachian and Kentucky Power to facility -- to fill their deficit. We also are proposing, as you know, a merger of Wheeling Power and Appalachian Power, though that's a less indirect effect here on Ohio, but.

Q. And how about the bilateral agreements, can you tell me more about that?

A. I said -- I said less indirect, I should say less direct perhaps.

Q. Can you tell me more about the bilateral agreements?

A. Are you referring to anything in particular?

Q. No, as to what you know.

A. Oh, yeah, I certainly would think that, you know, if we have opportunities to enter into bilateral agreements, we would -- as I mentioned, we have a lot of wholesale customers out there. I think Dr. Pearce mentioned perhaps 22 wholesale customers in various states so, you know, if there is an opportunity to enter into a contract that makes sense for us and the customer, we are going to do it. You would also -- yeah, I hope that answers your question.

Q. Mr. Nelson, are SSO retail sales subject to redistribution under the AEP interconnection agreement?

A. Retail sales, no.

Q. Mr. Nelson, on page 14 of your testimony you provide a sample calculation of the average rate method for several levels of switching. You include margins from retail sales in your gross margin numbers; is that correct?

A. They are not the margins from retail sales. I look at it a little differently. And there's a table at the top of 14 that goes through that methodology. What it says is that you don't really need to put these things in a bucket. If a kWh is available to sell in the PJM market, then that produces a certain margin and that margin, of course, needs to be shared on an MLR basis.

And just to tie this discussion, Mr. Jones, back, if you go to my -- page 7 of my testimony, I compare the three methods I've discussed in the testimony, the results, and I think the important thing to note from this is that when you get down to 100 percent shopping, the rate under the three methods converges and, of course, that's shown on the diagram of the next page how the rates converge but it's a little bit of a different concept and -- but it -- I think the important thing from the staff point of view is under the average rate method an off-system sale is an off-system sale.

We are not going to be able to track that kilowatt hour and say this is an AEP kilowatt hour put into PJM. Under the pool all off-system sales are treated the same; everybody gets their MLR share of that off-system sale.

Q. Mr. Nelson, again going back to the average rate method proposed in your testimony, what portion of the gross margin is adjusted for MLR in the 26 percent shopping case?

A. You could see that on -- in the table at the top of 14 it shows you the gross margin attributable to shopping, the MLR is applied to that gross margin. Because, again, it would be sold into the PJM market. We couldn't designate it, Appalachian, you don't get to share in this one, this is AEP Ohio's hour, it wouldn't work that way. So you apply the 40 percent MLR factor for AEP Ohio to that gross margin.

MR. JONES: That's all the questions I have. Thank you.

EXAMINER PARROT: Mr. Conway, would you like to take a break before we determine if you have redirect?

MR. CONWAY: Yes, your Honor.

EXAMINER PARROT: Let's take a 10-minute break. Thank you, everyone.

(Recess taken.)

EXAMINER PARROT: All right, let's go back on the record.

Any redirect, Mr. Conway?

MR. CONWAY: Just a couple of questions, your Honor, thank you.

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REDIRECT EXAMINATION

By Mr. Conway:

Q. Mr. Nelson, towards the end of your cross-examination by Mr. Jones, do you recall a question regarding the treatment of costs by Mr. Smith relating to the Amos and Mitchell plants?

A. Yes.

Q. And could you explain, clarify, or correct how Mr. -- Mr. Smith treated the capacity and energy costs related to Amos and Smith -- I'm sorry, Amos and Mitchell? Excuse me.

A. Yes. Mr. Smith left Amos and Mitchell in his capacity cost calculations. Amos and Mitchell were excluded on the energy margin calculation.

MR. CONWAY: Thank you, Mr. Nelson.

Your Honor, that's all I have.

EXAMINER PARROT: All right. On that limited basis any recross, Ms. Yost?

MS. YOST: No, your Honor.

EXAMINER PARROT: Ms. Thompson?

MS. THOMPSON: No, your Honor.

EXAMINER PARROT: Mr. Yurick?

MR. YURICK: No questions, thank you, your Honor.

EXAMINER PARROT: Mr. Kurtz?

MR. KURTZ: No questions.

EXAMINER PARROT: Mr. Randazzo?

MR. RANDAZZO: No questions, your Honor.

EXAMINER PARROT: Mr. Lang?

MR. LANG: No, thank you.

EXAMINER PARROT: Ms. Kaleps-Clark?

MS. KALEPS-CLARK: No questions.

EXAMINER PARROT: Mr. Jones?

MR. JONES: No questions, your Honor.

EXAMINER PARROT: Thank you very much, Mr. Nelson.

MR. CONWAY: Your Honors, I would renew our motion at this time of Mr. Nelson's rebuttal testimony, AEP Ohio Exhibit No. 143.

EXAMINER PARROT: Are there any objections to the admission of AEP Exhibit 143?

Hearing none, AEP Exhibit 143 is admitted.

(EXHIBIT ADMITTED INTO EVIDENCE.)

EXAMINER PARROT: Mr. Randazzo.

MR. RANDAZZO: Yes, I would move IEU 121, 122, 123, and 124.

EXAMINER PARROT: Are there any objections to IEU Exhibits 122 through 124?

MR. CONWAY: Your Honors, there's no objection to 121 or 122. With regard to IEU 123 which includes an excerpt from Mr. Pearce's exhibits to his testimony along with a number of handwritten notes, I think -- I think Mr. Nelson was not at the outset overly familiar with the comparison that Mr. Randazzo sought to make, although I think he ultimately concluded it was an improper comparison and inaccurate.

And so we object to the admission of IEU Exhibit 123 because of the -- I believe as Mr. Nelson explained, the apples-to-oranges comparison of the handwritten notes in the margin to the excerpt from Mr. Pearce's pages KDP-3 and 4.

With regard to IEU 124 the witness was not familiar with the document. This is the impairment analysis document. The witness was not familiar with it. And so there's no foundation for the document through the witness.

I would also note that the document was dated -- had an issue date of November of 2011 which was well before the entry on rehearing in this case which, of course, changed the regulatory situation dramatically.

So the document in addition to not having a foundation for its admission is stale and is not -- it's not able to advance the cause on any issue of fact in the proceeding. So we object to 123 and 124 of IEU's exhibits.

EXAMINER PARROT: Response?

MR. RANDAZZO: With regard to 123 I don't -- I will defer to the Bench's ruling on that. It was the handwritten numbers there for the convenience of parties. The numbers are all in Dr. Pearce's testimony, as we discussed with Mr. Nelson yesterday. And I showed him where they came from so whatever the Bench rules on 123, fine by me.

With regard to 124, Mr. Conway referred to it as the impairment analysis and as your Honors know, I explored this subject with Mr. Graves when he was on the stand and he described the role of an impairment analysis relative to identifying whether or not there's adequate cash flow to recover the costs of generating assets.

But more specifically, I would like to focus on what I think the major purpose of Exhibit 124 is relative to the issues in this proceeding. In -- in this case AEP has taken the position that as explained in Dr. Pearce's testimony, it is -- that the AEP Ohio generating capacity and the costs associated with this capacity to support generation service to switching customers is the basis upon which a capacity charge should be developed if you believe that embedded cost-based ratemaking approach is appropriate. From that assumption Dr. Pearce's mathematical illustration based upon FERC Form 1 data follows.

In the testimony of Mr. Nelson and other witnesses the -- Mr. Nelson acknowledged at page 2533, line 14, in response to a question of mine which was the -- "but the FRR obligation as you've just defined it is an obligation that is satisfied by resources other than those owned and controlled by AEP Ohio, correct? Yeah," answering Mr. Nelson. "The FRR obligation is on a system basis, East system basis."

And at pages 2517 and 2518, Mr. Nelson indicated most of the issues he was addressing in his testimony were related to the generation function. As I've already indicated, Dr. Pearce's testimony contains this critical assumption that AEP Ohio's generating assets are the source of the capacity that is provided to CRES suppliers, and the cost of those generating assets should be used to compute a so-called cost-based capacity charge, and that is summarized on page 3 of Dr. Pearce's testimony as I discussed with Mr. Nelson yesterday.

So the entire so-called embedded cost formula rate that is proposed by AEP Ohio in this proceeding is based upon Dr. Pearce's view that we should be using embedded costs of generation of AEP Ohio as the -- to establish a cost-based rate.

With regard to IEU Exhibit 124 which is a self-authenticating document, there's no question about its authenticity or the -- whether or not it's properly an AEP internal document that was provided in discovery. The document authenticates itself and then goes on to explain that the -- for the AEP Ohio generating assets they are not cost-based regulated generating assets, explaining that at page 3 of 5, and that the noncost-based generating assets are not operated separately but are coordinated and dispatched with the generating assets owned by the other East cost-based regulated operating companies.

It also states at page 3 of 5 that due to the nature of the electrical energy and the operation of the plants through the pool, it is impossible -- not just difficult, it is impossible to match cash inflows from sales to cash outflows from either purchased or generated power by unit or plant.

At page 2 of 5 in IEU Exhibit 124 AEP acknowledges that the generation -- generation assets of the Ohio companies are not cost-based regulated.

Finally, getting to Mr. Conway's

characterization of IEU Exhibit 124, at page 4 of 5, the IEU exhibit shows the results of AEP's internal effort to determine if future cash flows from the entire AEP East generating fleet including the AEP Ohio owned and controlled generating assets are sufficient to recover the company's generating assets.

At page 4 of 5 the chart that's boxed in that page indicates that the excess estimated cash flow is approximately $22.2 billion. If this was a relevant document in this proceeding, if there was a document that was probative to the core issues in this case dealing with what AEP Ohio's generating assets have to do with establishing a cost-based rate for capacity provided by AEP Ohio to CRES suppliers and whether the generating assets of AEP Ohio might be stranded as a result of some circumstance, I think Exhibit 124 is probably the most useful to the Commission's analysis.

For those reasons I would ask that Exhibit 124 be admitted.

EXAMINER PARROT: Mr. Conway.

MR. CONWAY: Just a few comments in response. I would just observe that this impairment analysis document, again, is directed towards analyzing the entire AEP East fleet, not -- not AEP Ohio. So it's not connected to the subject at hand here which is AEP Ohio.

It deals with cash flow analyses. It doesn't deal with ratemaking which is what we're about here. And it also deals with the matter on a 30-year review. It doesn't deal with it on a current three-year -- three-year forward view. So it's not -- simply isn't relevant to any of the issues of the case despite Mr. Randazzo's efforts to characterize it otherwise. So we would object to the admission of the document.

EXAMINER PARROT: Are there any other objections to the admission of IEU Exhibits 121 through 124?

All right. IEU Exhibits 121 through 122 there are no objections. Those are both admitted.

(EXHIBITS ADMITTED INTO EVIDENCE.)

EXAMINER PARROT: With respect to Exhibits 123 and 124, the Bench will also admit those exhibits and allow the Commission to determine what weight, if any, should be afforded to them based upon the testimony of the witness.

Finally, Mr. Lang.

MR. LANG: Thank you, your Honor. FES

moves Exhibit FES No. 126.

EXAMINER PARROT: Are there any objections to the admission of FES Exhibit 126?

MR. CONWAY: No, your Honor.

EXAMINER PARROT: All right. Very good. FES Exhibit 126 is admitted.

(EXHIBIT ADMITTED INTO EVIDENCE.)

EXAMINER PARROT: Mr. Conway.

MR. CONWAY: Thank you, your Honor.

(Witness sworn.)

EXAMINER SEE: Mr. Conway.

MR. CONWAY: Thank you, your Honor.

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EUGENE T. MEEHAN

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

DIRECT EXAMINATION

By Mr. Conway:

Q. Mr. Meehan, could you state your full name for the record.

A. My name is Eugene T. Meehan, M-E-E-H-A-N.

Q. And, Mr. Meehan, by whom are you employed?

A. I'm Senior Vice President with NERA Economic Consulting.

Q. And, Mr. Meehan, did you prepare or have prepared under your supervision rebuttal testimony which has been prefiled in this proceeding?

A. Yes, I did.

Q. And, Mr. Meehan, do you have a copy of your prefiled testimony with you?

A. I do.

MR. CONWAY: Your Honors, at this time I would like to mark as AEP Ohio Exhibit 144, I believe, Mr. Meehan's rebuttal testimony that was prefiled in this proceeding.

EXAMINER SEE: The exhibit is so marked.

(EXHIBIT MARKED FOR IDENTIFICATION.)

Q. Mr. Meehan, I would like to ask you whether you have some -- any corrections or additions to make to your testimony at this time, and I would first like to turn your attention to page 26 of your prefiled testimony and ask you if you have any corrections to make on page 26.

A. Yes. On line 4 of page 26, the word "or" should be "for," F-O-R.

Q. And before we continue on, do you have any other corrections to make to any of the pages of your testimony that precede page 26?

A. Yes, I have a few corrections on page 8.

On page 8, line 18, "33.75" should be "33.25."

Q. Those are dollars, Mr. Meehan?

A. Yes, 33.70 -- "$33.75" should be "$33.25". On line 20, "$3.75" should be "$3.25." "33 percent" should be "35 percent," on that same line.

On line 21, "33 percent" should be "35 percent," and on line 22, "33 percent" should be "35 percent." Those are the additions/corrections that would precede that.

Q. Okay. And then you mentioned a change on page 26 changing the word "or" to "for" on line 4; is that correct?

A. Correct.

Q. And then what is the next correction you have to your testimony, if any?

A. On page 33, line 3, it would be more accurate if "under $700 million" read "under $600 million." Both, of course, are true, but "under 600 million" would be more accurate.

Q. I notice that your Exhibit ETM-1 which is your resume or your vitae is -- is referred to as ETM-1. Would you have a correction to the designation of that exhibit to your testimony?

A. Yes. To be consistent with the testimony, it should be ETM-R1.

Q. Okay. Now, your testimony indicated a change of the "$700 million" figure to "$600 million" on page 33 and that -- does that relate to your exhibits ETM-2 and 3?

A. Yes. It would be from ETM-2, from the bottom box of ETM-2.

Q. Okay. Do you have any corrections to make to the Exhibits ETM-2 and ETM-3?

A. I do. I have replacement exhibits for ETM-2 and 3. There -- they are in substance the same, very little change to the numbers, but the replacement exhibits would match my workpapers.

So the replacement exhibits were the exhibits that were distributed with the workpapers, workpaper 11A, and were the exhibits intended to be filed with the testimony, inadvertently an earlier set of ETM-2 and 3 from a run that was not finalized was filed with the testimony.

So Exhibit ETM-R2 and ETM Exhibit R3 which are being handed out now would replace those exhibits. As I would note, the changes are on the order of 1 percent and would not affect any of my conclusions.

Q. So is your correction that you would have substituted for what currently is included with your prefiled testimony as Exhibits ETM-2 and ETM-3 the exhibits being passed out which are designated as ETM-R2 and ETM-R3?

A. Yes. Those are the exhibits I intended to attach to the testimony and are the exhibits included and consistent with my workpapers.

Q. And do you have any other corrections or additions to make to your testimony at this time?

A. No, I do not.

MR. CONWAY: Your Honor -- excuse me.

Q. And if I were to ask you the questions in your prefiled direct testimony which has been marked as AEP Ohio Exhibit 145, would your answers be the same as they appear in that document as corrected in the manner you have described here this morning and supplemented substitution of revised Exhibits ETM-R2 and R3?

A. Yes, they would.

EXAMINER SEE: Mr. Conway, you said Exhibit 144 or 145? I think it should be AEP 144.

MR. CONWAY: Hold on a second.

Thank you for that correction, your Honor. You are right. It should be 144.

Q. Mr. Meehan, could you make that change to your testimony so if you get questions about AEP

Exhibit 144, there is no doubt in your mind that's your rebuttal testimony?

A. Yes, I will.

MR. CONWAY: Thank you, your Honor.

Q. Let me ask the question again then, Mr. Meehan. With the corrections and additions you've made to your prefiled rebuttal testimony that is corrected and supplemented by the manner in which you've described this morning, including the revised Exhibits ETM-R2 and R3 that have now been substituted for your testimony previously marked as AEP Ohio Exhibit 144, would your answers be the same as they appear in that document?

A. Yes, they would, Mr. Conway.

MR. CONWAY: And, your Honors, at this time I would move for the admission of AEP Ohio Exhibit 144, and Mr. Meehan is available for cross-examination.

EXAMINER SEE: Ms. Kaleps-Clark.

MS. KALEPS-CLARK: No questions, your Honor. Thank you.

EXAMINER SEE: Mr. Lang?

MR. LANG: Yes, thank you, your Honor.

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CROSS-EXAMINATION

By Mr. Lang:

Q. Good morning, Mr. Meehan.

A. Good morning, Mr. Lang.

Q. When were you first retained by AEP Ohio for this engagement?

A. The 26th or 27th of April.

Q. And what was your assignment?

A. My assignment was to review the testimony then of Mr. Harter, critique the testimony, and if alternate modeling was needed to perform that critique, to perform alternate modeling.

Q. When did you first start your work?

A. I would say it was a Friday, I believe if the 28th was the closest Friday, probably starting substantive work would have been the 28th. There may be a little work the day before on the Thursday. So I'm not sure. If the 27th was a Friday, then it was the 27th.

Q. All right. On pages 27 and 28 of your testimony, you describe different data provided to you -- provided to you by AEP Ohio Witness Nelson. Can you -- can you tell us on what date Mr. Nelson provided that data to you?

A. That data would have come in on, you

know, the 27th, 26th, 27th, 28th of April, dribbling in in different fashions.

Q. So that would have been right around the date that you were retained?

A. Yes.

Q. Did you also execute a contract with AEP Ohio on that -- on the date you said was your retention date?

A. No. The work has been quite expedited. We have been doing this all on just an oral understanding.

Q. Okay. Were you in the room when Mr. Nelson earlier today described the data that he provided to you?

A. Yes.

Q. And was his description of the data that he provided to you accurate? Is there anything that he left out?

A. It's hard to do that from memory. He certainly got the key elements, which were the input/output curves, the fuel costs, the minimum up and down times.

We also received maintenance schedules, retirement dates, information on units that were must run, units that were not staffed on a seasonal basis, projections of the costs of the coal units considering the current contracts, the adders or basis for gas.

We did actually develop our own forward gas and power price forecasts. And we did receive things like variable O&M consumables and emission allowance costs from AEP -- or emission allowance prices, I guess would be.

Q. So you said that you used your own natural gas price forecasts so you did not use what was provided to you by AEP with regard to natural gas price forecasts?

A. Well, AEP had provided natural gas price forwards, but they were as of the date of March. We examined our own forwards. We took our gas forward prices from -- for the last update of this testimony I believe it was May 9.

Q. So your natural gas forwards would be as of May 9. Can you tell us how that compared to what AEP provided that was from sometime in March?

A. Not exactly but the forwards have dropped considerably from March 16 to now so they are lower.

Q. Now, you also mentioned fuel cost data, and on page 19 of your testimony, line 3, you state that "The correct level of fuel cost is about $24 per megawatt hour based on data provided by AEP."

Can you tell me what data you used to develop the estimate of $24 per megawatt hour fuel costs for Gavin?

A. Yes. AEP would have provided a forecast for each month of the fuel that would come out of inventory for Gavin, I think primarily based upon existing contracts committed to over the period. Of course, if they didn't do the whole burn, it would be filled in with some spot purchases, but it is what AEP forecasts right now based upon its contracts that are locked in, probably a little residual at spot for what the fuel costs for Gavin will hit the books on at each month in the future.

Q. Did you have an opportunity to review any of the coal contracts for Gavin?

A. I did not do that. I relied on AEP for the cost data.

Q. Do you know whether the coal contracts include must-take provisions?

A. No, I did not review the coal contracts.

Q. Just asking you if you know what -- if you happen to know if that's a particular provision that's in the contract, if that's something you discussed with Mr. Nelson or someone else at AEP?

A. No, I do not know whether -- the type of contract.

Q. Did you learn from AEP whether the coal contracts have any price adjustment provisions?

A. No. I did not review that.

Q. Did you -- with regard to the fuel cost estimates for the time period of the analysis that was provided by AEP, did you confirm that data against other -- other non-AEP data?

A. No. I'm really sponsoring the analysis, and I'm relying on AEP to provide and support independent cost data.

Q. Does your analysis assume that there will be changes in coal prices over the next three years?

A. There are -- there certainly are changes in coal prices on a monthly basis.

Q. Is there -- is there an identifiable trend? Is it trending up, down? Is it something you could say?

A. You know, it's in my workpapers. My general feeling is that there's a light upward trend, not a large upward trend, but you certainly can look at that.

Q. Does your analysis take into account forward energy sales made by AEP Ohio -- or made by

AEP?

A. No. My analysis, as I state in my testimony, is an analysis of the gross margins that could be achieved selling the entire output of the units against the PJM spot market.

Q. Mr. Meehan, would it be fair to assume as part of your analysis that if AEP Ohio does have long-term contracts for coal, that AEP Ohio would also be engaging in forward energy sales as a hedge against those contracts?

A. No, not necessarily.

Q. Is -- would it be one of the options for AEP Ohio to engage in?

A. Could AEP Ohio make a forward sale? I don't know of anything that would prohibit that but they do have -- obviously still have a residual load obligation for the load that does not switch.

Q. If I could ask you to turn to page 23 of your testimony. At lines 3 to 5 you refer to the unrealistic assumption that units can be turned off and on at the flip of a switch. Is -- is it your position that the AuroraXMP model does that?

A. Well, it would be my position that I would suspect the AuroraXMP model gives the user a lot of ways to control if that's done or not. But from Ms. Medine's testimony where she says that units have input into the model into her version of Aurora, only the full load heat rate and a zero on or off heat rate, that, yes, the way she is using the model, she has to be using it in a way that allows that, and I think my analysis confirms that that has to be the case. That's the only way she could get numbers that unrealistic, in part, would be to use the model that way.

Q. If the model is turning units off and on by the hour, then it would not reflect negative margins for any hour; is that correct?

A. That should be the case, yes.

Q. Okay. Are you aware that Ms. Medine's model runs do reflect negative margins?

A. No. I don't believe that level of detail was provided.

Q. On page 25 of your testimony, lines 7 through 11, you state that price will differ by plant. Is it -- is it correct that your analysis does not include the impact of the AEP pool agreement or the AEP East interconnection agreement on energy revenues?

A. Yeah. I make clear right up front in my testimony I'm looking at the gross margins, what the units would get selling in their entirety to the PJM market. I am not looking at the AEP intercompany agreement.

Q. Now, the units -- when the units sell into the PJM market, that's done through the AEP East pool; isn't that correct?

A. I don't believe that's correct. I don't believe the pool sits between the units and the market. There may be a bidding agent, a service corporation that does, but the pool would operate after the fact.

Q. Well, the pool -- well, can you explain what you mean the pool operates after the fact, that means the pool deals on -- on the revenue side; is that what you're referring to?

A. No. We -- operate after the fact to divide up the load and the generation. I mean PJM is a gross -- essentially you can look at all the generation as being sold into the PJM market and all of the load that's being purchased from the PJM market.

Q. And then under the pool, the revenue from off-system sales is allocated on a pool-wide basis; is that your understanding?

A. You know, I don't even get into that.

I'm preparing the gross margins. I think the parties in this case, both staff and AEP, have their methodology for going from gross margins to reflecting pool sales, but that's not an issue that I looked at.

Q. On page 28 of your testimony, the top around line 3, I think, you refer to units that must run for area security. Is the determination of those units also based on information provided to you by AEP Witness Nelson?

A. Yes, it is.

Q. Is part of what's included in your analysis calculating the 8,760 hours shape for day-ahead LMPs?

A. Yes.

Q. And that's done -- that calculation is done at the AEP -- is done at the AEP generation hub?

A. Yes, and then it's adjusted to the plant loads.

Q. So what is the basis for that calculation?

A. Okay. I'll just refer to my testimony so -- to make it a little bit easier to follow. It would start at page 23, line 16. So at page 23, line 16, as I describe for the first step is to take the monthly on- and off-peak market price for each month, this would be the quoted price, the average of the bid in ask at the AD Hub for the remainder of '12, 2013, '14 and the first four months of '15.

Now, generally what we'll see at this point in time is that for the remainder of '12, the detail is available on a monthly or bi-monthly basis for on- and off-peak quotes.

For 2013, peak quotes are available. For '14, '15 and off peak of '15 only calendar quotes are available so the first step. Then we look at historical ratios from January, 2009, until the present and we look at where the individual months traded relative to the annuals and we break the annual calendar quotes if monthly quotes aren't available out into annual -- out into monthly on- and off-peak quotes. So for each month from 2012 to 2015, we have a market representation of the actual quote at the AD Hub.

Now, the second step we calculate the basis differential between the AD Hub which is the AEP Dayton Hub which is a traded point where the forward market's quoted and the AEP generation hub and we do that using historical day-ahead LMP data. Just to be clear, the basis differential is the percentage difference.

And what we would see is that consistently or fairly consistently the AEP gen hub trades a few percent below or prices out a few percent below the Dayton Hub, the AEP Dayton Hub. We then develop 8,760 hour shape using 2011 data for the day-ahead LMPs at the AEP generation hub. And --

Q. I think I can -- if I could stop you there, because that was -- the question was about that -- I guess only through bullet point 3. So and you said when you developed that shape, you are using 2011 data, you are not using the average of the 2012 through 2015 that's in the first bullet point; is that correct?

A. Right. That doesn't exist.

Q. Okay. What is the basis for believing that the pattern of day-ahead prices in 2011 will be representative of prices going forward?

A. Well, one of the things is that these things change every day so even though we are using one year, we are getting 8,760 different observations. And consistently in my experience a hub line, the generation hubs are always going to trade below the AD Hub.

When you use a model, you have to assume single year for load shape so it's a necessity to assume a single year. I think 2011 is as good as any historic year that we have. In my experience what year you use wouldn't make a big difference. So using it is a necessity to take a year and I used the most recent historical year.

MR. LANG: Thank you, Mr. Meehan. That's all the questions.

EXAMINER SEE: Ms. Kingery.

MS. KINGERY: I have no questions, thank you.

EXAMINER SEE: Mr. Darr.

MR. DARR: Thank you, ma'am.

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CROSS-EXAMINATION

By Mr. Darr:

Q. Good morning, Mr. Meehan.

A. Good morning, Mr. Darr.

Q. This is the -- at least the second time that you've prepared testimony for the Ohio Commission; is that correct?

A. It's the third time.

Q. And at least one case you prepared testimony with regard to -- do you want to take a break?

A. I'm good.
Q. Previously you provided testimony for the FirstEnergy operating companies; is that correct?
A. I did.
Q. And in preparation for that testimony you reviewed the statutory provisions that would govern the approach used by the FirstEnergy company in that case, correct?
A. Yes, I did.
Q. And specifically in that case you were looking at the operating provisions or the operable provisions of Senate Bill 3 as the effect of the FirstEnergy transition plan; am I correct in that as well?
A. That would be correct.
Q. And in your testimony that you prepared you indicated specifically what the transition period would be in that case?
A. I don't recall that. I recall looking at shopping projections. And opining on the reasonableness of the shopping direction.
Q. Specifically your testimony was to address the shopping credit and any incentive credit, correct?
A. I believe that's correct, yes.

Q. In preparation for that you also analyzed the relevant market periods or market transition periods as well, did you not?

A. I may have. I don't recall that portion of the testimony.

Q. Would it assist you in your testimony today to take a look at that testimony?

A. Sure.

Q. And if it would assist you, specifically if you would take a look at pages 3 and 4.

A. Okay. I'm there.

Q. Could you take a look at that and tell me if this refreshes your recollection?

A. Yes.

Q. And you identified at that time that there would be a five-year market development period, correct?

A. Right. I was not developing that. I was just identifying that, yes.

Q. And also you identified that there would be a five-year rate freeze with a discount of 5 percent on the generation rate -- or a 5 percent generation rate reduction for residential customers, correct?

A. Correct.

Q. And you also identified the Commission would have to make findings of the level of the generation costs and generation regulatory assets which will determine the amount that the EDU would be permitted to collect, correct?

A. Yes, that was my understanding of one of the key elements of the prevailing legislation.

Q. And you also identified there would be a limit on the period of recovery for generation transition costs which you identified as above market or stranded generation costs of five years and establish the number of EGC or generation assessment charge per kWh basis in order to recover those costs, correct?

A. That was my understanding of SB 3 as it applied to the FirstEnergy operating companies, yes.

Q. And I may have misspoke. The GTC, the generation transmission cost, correct?

A. Yes, correct.

Q. And there would also be a determination of the generation components or as it became -- officially became known as big G of the rate by subtracting from the total frozen rate of the T&D component or unbundled components such as taxes, regulatory transition charge, and the generation transition charge, correct?

A. That is correct.

Q. Now, for this assignment, you outlined for us some of the materials that Mr. Nelson provided for you and that included a variety of AEP-specific cost information and projections, if I understand it correctly; is that right?

A. Yes, basically AEP cost information.

Q. And when we are talking about AEP, are we talking about the generation facilities of AEP Ohio, or are we talking about some larger entity?

A. Just AEP Ohio for my analysis, only the AEP Ohio information was required.

Q. And when we're talking about the information you received, are we talking about any information with regard to other resources that might be deemed generation resources for purposes of PJM?

A. I don't understand the question.

Q. You're familiar that there are different kinds of resources that may be bid into the PJM market?

A. Yes.

Q. And some of those resources are, in fact, generation plant, correct?

A. Correct.

Q. Some of those resources may also be energy efficiency resources, correct?
A. I don't believe energy efficiency can be bid into the energy market.
Q. How about demand resources?
A. There's certain types of demand resources that can be bid.
Q. Would emergency response resources be part of those?
A. They could be.
Q. I'm sorry?
A. It's possible.
Q. What about the capacity market? Are there different kinds of resources that could be bid into that market as well? Besides --
A. Besides --
Q. Plant?
A. -- generation?
Well, there are certain demand resources that will qualify for some of the energy limited components of the capacity market.
Q. What about energy efficiency?
A. You know, I am not sure in PJM what they've done on that. I know in some markets you can bid energy efficiency into capacity markets and

others you can't.

Q. Are you familiar with the reliability assurance agreement?

A. I haven't read it in about 10 years.

Q. And that would predate the creation of the RPM market, correct?

A. I think the reliability assurance agreement does predate that, yes.

Q. Make sure we're talking about the same thing, would you agree with me that the RPM market was created as a result of modifications in roughly 2004, 2005, through 2006? If you know.

A. Modifications to what? I know the market started in 2007.

Q. And replaced the capacity credit market? So your review of the RAA predated the adoption of RPM?

A. Yes, but as I said, I believe the RAA itself does.

Q. Going back to the question that -- before we started off on this discussion of the RAA, besides the materials that were provided to you by AEP Ohio with regard to the operation of their facilities and, for example, future energy and environmental expenses, did you receive any documentation about the scope or statutory provision that would govern this proceeding?

A. No.

Q. Did you receive any materials with regard to administrative provisions that might govern this proceeding?

A. No. I don't believe they would be necessary. My assignment was to review Mr. Harter's testimony, subsequently Ms. Medine's testimony, and provide my opinion as to how well that reflected gross margin.

Q. So the bottom line is you were to provide a correction and a proposal as to how to calculate the energy credit.

A. Definitely not -- that's not what I testified to. It's not what I did.

Q. Well, share with me again the scope so that we all understand it.

A. My scope was to critique Mr. Harter and Ms. Medine's testimony as to the level of gross margins produced, and in doing so, if needed, to come up with an alternate quantification of gross margins. Gross margins are one input in the capacity credit. I don't go beyond gross margins. That's something that both AEP and staff have methodologies for doing.

So I don't delve beyond the gross margin analysis.

Q. Fair enough. If I understand it correctly, then, the scope of your task for today was to provide testimony with regard to a critique of the staff position with regard to the energy credit and also to provide an alternative calculation as to the energy credit; is that correct?

A. Well, the primary purpose for the alternative calculation is to examine the reasonableness of staff's calculation. But in doing so I do provide an alternate calculation that could potentially be used after processing for the other factors to compute an alternate version of the energy credit.

Q. So I'm guessing the answer to my question is yes?

MR. CONWAY: Objection. He answered the question.

MR. DARR: Actually, he didn't, your Honor. He gave us a wonderful explanation of what he did but he didn't answer the question, which was yes or no.

MR. CONWAY: He explained what the purpose of his testimony was including the alternative calculation of the energy credit as a means to critique the staff's position. He's explained it twice now and Mr. Darr keeps trying to go back and get him to agree that it's two separate things that he did when it's all integrated, so I object.

MR. DARR: And I object to Mr. Conway explaining his testimony, your Honor.

EXAMINER SEE: Thank you. Thank you, Mr. Darr.

Thank you, Mr. Conway.

(Record read.)

EXAMINER SEE: Go on, Mr. Darr.

MR. DARR: Thank you, your Honor.

Q. (By Mr. Darr) Based on your experience here in Ohio, is it your understanding that generation is a competitive service under Ohio law?

A. You know, I don't feel comfortable answering that question. After SB 3 I think I would have said yes. With the new legislation I have to say I really just don't understand how the -- certainly people are certainly always allowed to shop, but I really don't understand the intersection of competitiveness in regulation under the whole energy supply plan framework.

Q. Have you made any independent study of the effects of Senate Bill 3 -- excuse me, Senate Bill 221 on Senate Bill 3?

A. No. That's why I don't understand it. I have done no studies.

Q. Would you agree with me capacity service is a part of the generation service?

A. No. I just don't have a good enough basis for understanding what you mean by those terms.

Q. Well, on page 8 of your testimony, you state "As I understand the situation, the PUCO may set an FRR capacity rate that is generally based on subtracting energy margins from fixed costs." What's the source of that understanding?

A. I recall reading prior pleadings in the capacity case, I guess it's this case where it was explained that AEP was requesting a cost-of-service rate.

Q. Are you opining as to the scope of the Commission's authority to set that rate?

A. I am not.

Q. And you've already indicated that I believe that you haven't reviewed the -- well, let me ask this again.

In case I've missed it, have you reviewed in any way the FRR provisions as part of your presentation of your testimony? I'm speaking now of the ones contained in the PJM document.

A. No. Again, I'm just looking at the gross margins and that would not be relevant to my -- to my work here.

Q. Repeatedly in your testimony you criticize the gross margin estimate developed for the staff to be used as an offset for the cost-based capacity for AEP Ohio during the remainder of the fixed resource requirement period; is that correct?

A. Correct.

Q. Is it correct that one of your most significant criticisms, which I noted at page 6, the second bulleted point, of the energy margin analysis performed on behalf of the staff or for the staff, is the failure to calibrate the model outputs against actual market results; is that correct?

A. I think that's conceptually correct, yes.

Q. Would it be your view that any administratively determined offset should be calculated in a similar manner, that is, against the market to the extent that forward-market prices are available?

A. Yes.

Q. In order to calibrate model outputs,

would another option to using future prices be the use of actual market transactions? Other actual market transactions?

A. Well, if they were contemporaneous and covered the same product or service, sure, you could look at that. But they would have to be contemporaneous is the key.

Q. Would bids in an auction for electricity supply be another valid source for those future market prices?

A. I would doubt you would find one for a comparable product.

Q. If you could, would that be appropriate?

A. If you could find one for the net revenues produced by plants sufficient as AEP's, I don't think it would be for supply.

It would be to have some type of product like that. It certainly could be appropriate, but I don't think that exists in the market.

Q. Your testimony indicates that you relied on Mr. Nelson for all the units' specific operating characteristics, and I think we mentioned that earlier, correct?

A. Correct.

Q. Do you know if the costs provided to you by Mr. Nelson are historical actual costs or whether they are forecast in the future costs?

A. As I said, I believe by and large they are forecasts formed especially on the fuel price side by existing contractual provisions, but they are forecasts of the costs that will prevail over the 2012 to 2015 period.

Q. So it's your belief these are forecasts as opposed to historical; is that correct?

A. That's correct.

Q. Mr. Nelson also provided with you forced outage rates; is that correct?

A. Correct.

Q. Do you know if those were historical or estimated future forced outage rates?

A. I don't know. My suspicion would be they would be historical, that companies would not forecast those.

Q. Your workpapers show you used quotes for power needed at the AD Hub, as we discussed previously. Do you know what the source for those quotes is?

A. You know, I don't. I discussed that with my staff. They regularly pull these quotes, and it would probably be Bloomburg. They also have access to broker quotes, but they tend to rely on Bloomburg when it's possible.

Q. Did you go back and verify a particular source?

A. No. Again, someone on my staff did that and someone else checked it. I didn't go back and verify those calculations.

Q. Is it correct within of your criticisms of the analysis performed on staff is that it fails to accurately reflect how AEP generating units will be run?

A. Yes, that is correct.

Q. And that's because you believe the modeling performed on behalf of the staff does not accurately capture things like minimum and maximum run times, heat rates, and that vary over the output range of a generation plant, correct?

A. That's correct.

Q. And an additional criticism you have to the staff analysis is that they relied upon zonal rather than nodal models; is that correct?

A. That's correct.

Q. Is it correct that congestion occurs in the LMP market price when that -- let me start over again. Is it correct that when congestion occurs in an LMP market price, there's separation that occurs in the price of the buses?

A. Yes.

Q. Is it correct that when congestion occurs in an LMP market, a generation unit that is contributing or causing the congestion will see its price lowered at that bus?

A. Well, I think that's a fair characterization, yes.

Q. And when congestion occurs in an LMP market, if additional output from a generator could help relieve the transmission constraint, the price of that -- at that generator's bus in the network will increase, correct?

A. Relative to what it would be absent no congestion, yes.

Q. Are you aware that congestion is a frequent occurrence in an LMP network?

A. Yes.

Q. Did you study as part of your analysis for this proceeding how many hours in the recent years in which congestion affected the prices within the AEP zone in PJM?

A. Yes.

Q. Did PJM dispatch generations up or down

to manage that congestion, if you know?
A. Well, there would be some nodes with negative congestion which would imply a downward dispatch; some nodes with positive congestion which imply an upward dispatch.
Q. Are you aware if PJM has contracts with other entities such as the Midwest ISO that would obligate PJM to re-dispatch this energy to help manage transmission within the Midwest ISO?
A. I am not aware of PJM contracts with the Midwest ISO.
Q. Now, you relied on future market prices as the foundation of your analysis over this three-year period, correct?
A. For the revenue side of my analysis, yes.
Q. And these prices that you relied on were a combination of monthly and annual delivery quotes?
A. That's correct.
Q. So for a number of these months during this period, you did not have information at the hourly level of granularity, correct?
A. Right. I went through that with Mr. Lang, how we created the hourly profiles.
Q. And we've discussed -- you discussed with him and it's discussed in your testimony how you

broke that down to hourly average amounts, correct?
A. Correct.
Q. In your workpapers do you have any estimates of the AEP East hourly loads during the three periods -- three-year period you analyzed?
A. No. It's not a necessary input to my workpapers.
Q. Did, in your workpapers did you estimate the PJM hourly loads during the three years?
A. No. Again, I would say that's not a necessary input to my workpapers.
Q. Did you look at the eastern interconnection for purposes of doing your analysis?
A. Implicitly, yes, I think the eastern interconnection is certainly implicit in the AD Hub, the market outlook of what's going to be happening through there and how it's going to flow through to this market, yeah. Yes.
Q. Did you have in your workpapers any estimate of the eastern connection hourly loads during the three-year period?
A. No. Again, it's not necessary.
Q. In terms of your determining of the dispatch, can you explain to us how you dispatch the generating units as you an -- that you analyzed in

order to estimate the gross margins?

A. Yes. Once I have an hourly profile which is based off the forward prices for the month, the on- and off-peak periods and the historic AEP gen hub load shape adjusted to the nodes by a basis factor, I then look in detail at each of the -- each of the units and look at their costs and their operating constraints, their minimum up and down time. Essentially simplistically I can describe -- go through on a chronological basis, start the unit up when the outlook for profits over its minimum up time would be positive and the profits in that hour would be positive, shut the unit down when the outlook and the hourly profits cease to be positive.

If the unit started up, it has to run over its minimum down time, or minimum up time. If it's down, it has to stay down over its minimum down time and then determine if a unit would not run, it would not be economic to -- it would be economic to run over the entire, let's say, 36 or 72 hour up time period.

But let's say over the nighttime hours it would be uneconomic, it runs at minimum load, and then look for situations where if it's on at minimum load but it would be more economical to -- because of the low incremental cost at that point increase its loading we would increase the loading at that point and figure out where the unit would run in light of these constraints, what its revenues would be and what its costs would be.

Q. Now, this was specific for the AEP units only, correct, AEP Ohio units?

A. AEP Ohio units, correct.

Q. Your dispatch model did not take into consideration any physical conditions or limitations that might occur on the PJM system, did it?

A. They would be all implicit in those hourly prices.

Q. You understand the term "security constrained unit dispatch"?

A. Yes.

Q. Can you explain what your understanding of that is?

A. A security constrained dispatch is essentially a linear programming dispatch to a second contingency.

Q. Okay. Can you turn that into English for the record?

A. Well, a security constrained dispatch has all of the generating unit bids and offers for incrementing and decrementing. It has all the transmission information. The security constrained part of that is then figured out for the each of the five-minute intervals that it looks at. It figures out what is the dispatch level that can minimize costs given those bids and given two contingencies, in other words, two things happening on the system; two transmission lines failing, a generator and a transmission line failing, and it produces its -- its resulting price.

Q. And are you familiar with the fact that PJM uses a set of constraints similar to what you've just described?

A. Yes.

Q. Now, with regard to the units that you reviewed, are you -- to your knowledge does AEP Ohio dispatch its generating units or does AEP offer its units into the PJM market?

A. I believe AEP offers units into the PJM market.

Q. Is it correct that one of the reasons that PJM relies on the security constrained unit dispatch is to manage the transmission congestion that we've been talking about and make sure that -- make sure facilities are not overloaded?

A. Relative to their second contingency loads, yes.

Q. Is it correct that one of the reasons PJM relies on security constrained unit dispatch is to make sure voltage remains within acceptable levels?

A. Sure.

Q. And is it also correct that one of the reasons PJM relies on security constrained unit dispatch is adequate VARs support is available?

A. I'm not sure but I don't believe VARs would be included in the security constrained dispatch.

Q. Did AEP Ohio specify to you any units that must be treated as must-run units?

A. Yes.

Q. And could you identify that for us, please?

A. They are in my workpapers. I don't believe I can identify them off the top of my head. I know two units of Kammer must run. And there were like three other units but I don't recall those.

Q. Now, you also, as we talked about before, identified concerns about the lack of calibration in the EVA model, correct?

A. Yes.

Q. And your point is that actual future prices provide a superior input assumption to predict gross margins rather than the EVA approach of attempting to model future LMPs, correct?

A. Correct.

Q. Would you also agree that using historic cost of fuel would not be a properly -- would not be properly addressing the calibration concerns?

A. I don't think using a historic cost of fuel in going-forward analysis is -- is accurate. I don't know that I would put that under a calibration issue.

Q. In general it wouldn't be appropriate for your -- your approach to the calculation; is that correct?

A. Well, I think for anyone who is projecting margins, I would not want to use a historic cost of fuel.

Q. And I think you would agree that determining what the appropriate margin is is more than just calculating the forward LMP, correct?

A. Definitely. You have to consider the operating constraints as well and you have to consider the costs.

Q. For example, you would -- a good

prediction of LMPs might be offset by a bad prediction as to cost, correct?

A. Definitely.

Q. Is there anything in your workpapers that indicates how you tested your model to as whether or not it accurately measured gross margins?

A. Well, I actually would say my Pro-Model is calibrated to the forward prices because it's derived from the forward prices.

Q. So the calibration is inherent in your --

A. In the use of the forward prices.

Q. Did you go back and attempt to look at the forward prices versus the LMPs for prior years to see whether or not that bore any relationship one to the other?

A. I did not do that.

Q. Now, with regard to NERA, in addition to providing testimony, you also prepare, for lack of a better term, white papers, correct?

A. That is one -- we do that on occasion, yes.

Q. And, in fact, you, with Wayne Olson of NERA, have prepared a white paper for Compete Coalition, correct?

A. Correct.

Q. And that white paper appears on your website at NERA?
A. I have not checked that recently. I would assume it may.
MR. DARR: May I have this marked as IEU Exhibit 125?
EXAMINER SEE: Yes, 125.
MR. DARR: Thank you, your Honor.
EXAMINER SEE: The exhibit is so marked.
(EXHIBIT MARKED FOR IDENTIFICATION.)
Q. Do you have in front of you what's been marked as IEU Exhibit Ohio 125?
A. I do.
Q. Could you identify this for us, please?
A. This would be a white paper prepared for the Compete Coalition discussing the benefits of competitive electricity markets.
Q. And when was this prepared?
A. I'm looking for a date and absent a date my guess would be -- oh, it's February, '08.
Q. And where did you find that date?
A. On the front page.
Q. Helpful, isn't it?
A. Yes.
Q. Would you identify for the record who the

Compete Coalition is?

A. It's a group of electricity consumers and producers that favor competitive markets, I believe it includes entities such as Wal-mart, Constellation Energy, would be two members I can recall.

Q. And would I be correct that in this paper you contrast what you describe as traditionally regulated utilities with an obligation to serve on the cost-of-service electric structure markets which refer to the organization of electric markets in states where utilities no longer have an obligation to plan and build generating capacity and have often divested generation ownership?

A. Are you reading that from a portion of the paper? I have to say it's hard to recall this paper generally right now.

Q. Well --

A. I do recall preparing it, but.

Q. I'm looking at page 1 of the "Executive Summary," for example. And specifically note 2.

A. Okay. Note 2 discusses what traditionally regulated utilities do.

Q. Okay. Specifically on page 1 of the executive summary you are outlining here the comparison that you're going to be drawing throughout the white paper, correct?

A. Well, I think I say the purpose of the paper it to present an objective review of both traditional and competitive electricity markets in order to assist policy makers as they critically assess their policy options.

Q. And this paper was drafted in response to price increases that were occurring in the electricity market at the time; is that accurate?

A. At this time there certainly were price increases occurring in traditionally regulated markets.

Q. And is it fair to say you were responding to criticism of deregulation of generation markets as being a cause of those price increases?

A. That's a reasonably fair characterization, yes.

Q. And, in fact, you attribute those price increases to the -- to coincident; is that not correct?

A. I don't recall to that extent. You would have to show me. What do you mean, regulated price increases in the deregulated market price increases?

Q. If you go to page 3 of the summary, the last bullet, is it not correct you say "Recent price increases are largely driven by fuel price increases, and have occurred in both competitive and traditionally regulated states"?

A. I do say that, yes.

Q. And would it be fair to say among the conclusions of your white paper is that the differences between cost-of-service regulated states and prices derived from competition are predictable and certainly include the fact that regulated rates are founded on utilities' and regulators' judgment about attributes of the product rather than the discipline of the market -- of market forces; is that correct?

A. I don't know. Could you point me to that?

Q. Well, I'm on page 2, first bullet.

A. Yes. I think what I'm referring to there is that if you have regulated rates rather than having market discipline, you may have things like commissions setting reliability standards that may be high or environmental RPM TS types of impacts, and those are going to be factors in setting traditional rates, where if you leave that to the market, the market would decide on those.

Q. Then you've also concluded that regulated rates result in utilities and regulators imposing their choices on customers; is that correct?

A. Yes, I do conclude that.

Q. And you also conclude that "Cost-based regulation makes it difficult for customers to make choices based on their own preferences and responses to market price signals," correct?

A. Correct.

MR. DARR: Your Honor, with regard to the rest of this examination it refers to a confidential portion of Mr. Meehan's workpapers and I want to know, first of all, whether or not the company wishes to maintain the confidentiality of the materials in those workpapers, and second, whether or not it would be appropriate to -- if that's the case, whether or not it would be appropriate to hold this -- remainder of my cross-examination until the others have completed theirs.

MR. CONWAY: We definitely want to maintain the confidentiality of our information, your Honor.

EXAMINER SEE: Okay. Let me inquire, is there another party that plans on cross-examining the witness on any portion -- on any portion -- if you plan on cross-examining the witness based on the confidential information.

MR. JONES: No, your Honor.

EXAMINER SEE: So you would be the only one, Mr. Darr.

MR. DARR: If it would be helpful, I can share with the company right now the one page, one line basically, actually several lines of the workpaper, and they can make a decision about whether or not they wish to maintain confidentiality about this one day's information which might -- you know, there is no point in maintaining confidentiality of this if -- or going through this difficult process if we -- they're not -- if they are going to waive -- excuse me.

MR. CONWAY: Well, your Honor we don't know quite what it is we are being asked to consider waiving the confidential -- confidentiality for, so maybe if we took a short break and talked to Mr. Darr about it, come to a conclusion.

EXAMINER SEE: We can do that, Mr. Conway.

Let's take a -- let's take a break until 12:30.

MR. DARR: Thank you, your Honor.

(Recess taken.)

EXAMINER SEE: Let's go back on the record.

Mr. Conway, have you had a chance to review the item that Mr. Darr was going to show you?

MR. CONWAY: Yes, your Honor. I think that our agreement is that Mr. Darr will use the document in his cross-examination but attempt to achieve the objectives he has without actually reciting specific values from the document, and as a result, we would at a minimum be able to avoid having the transcript be sealed during the cross-examination -- for the cross-examination and we can deal with at the end of that whether or not there is any need to actually admit the document into the record, and if not, great, if it is, then we simply would be left with sealing the -- sealing of one- or two-page document rather than -- rather than having the combined challenge of the transcript plus the document. I think that's our -- our agreement. Am I correct?

EXAMINER SEE: That correct, Mr. Darr?

MR. DARR: I think the plan is generally as he's described it. If it needs to be drilled down to specific information, then we'll cross that bridge when we get to it.

EXAMINER SEE: Good. Then let's proceed.
Q. (By Mr. Darr) As part of the materials that you provided in support of your testimony, you provided a rather extensive set of workpapers, correct?
A. That's correct.
Q. And in those workpapers, is a calculation by plant of hourly margins; is that correct?
A. Correct.
Q. And do you have in front of you the calculation for June 1, 2012, for the Amos 3 plant?
A. I do.
Q. Now, with regard to that particular plant, let's just take a look at the first hour that's listed there. And, again, with the understanding that we're not going to go into the values contained in the calculation of the first hour, could you just walk us through how this worksheet calculates the gross margin?
A. Okay. I can walk through each of the columns, if that would help, without mentioning the numbers.
Q. Okay. Well, you start out with the -- in the first column an identification of the date and hour, correct?

A. Date and the hour, yes.
Q. And then for that hour you provide an hourly dollars per megawatt hour LMP price, correct?
A. Yes, the market price, yes.
Q. And then in the next column it's split up between minimum capacity and maximum capacity. Could you explain what that refers to?
A. The minimum capacity is the minimum capacity of the unit, and the maximum capacity is the maximum capability of the unit.
Q. Now, would you go through the rest of the cost calculation and how you go about doing that?
A. On the next column is the capacity at the most efficient operating point. That's a theoretical point. It doesn't have to be between the min and the max. It says given the heat rate curve what would be the most efficient point to operate this unit at so it identifies here a value.
And then in the next column we identify what we call capacity level where price equals marginal cost. And, again, this could be anywhere from negative to above the capacity unit, takes the heat rate curve, takes the LMP in column 2, and says given a completely unconstrained world, where would this unit operate such as the incremental cost at

that point would just equal the market price. And for this unit this variable is probably not used too often.

For some units, you know, it could come into play if dispatch was between min and max. If it was to fall between min and max, it would be relevant.

We then look at the operating level in this unit which in this case is all the maxed capacity, and if we could flip the sheet for a second, that would be the -- the -- that would be the, you know what that -- we don't have to flip yet. The operating level of the unit is actually the unit -- at which the unit would operate if it were to be operating in that hour.

We look at the average heat rate at the operating level. That's solved by taking the operating level and what's called the input/output curve, the heat rate curves, it's a quadratic equation.

We look at the adjusted fuels in dollars per million BTU, and adjusted fuel is the fuel cost data provided by AEP forecast contracts lined up, what it's going to be in dollars per million BTU.

We look at the variable O&M, also a value provided by AEP. We have startup costs in there. We don't look at them every hour but they're in there. We then compute the variable energy costs. The variable energy cost is a function of the adjusted -- the average heat rate at the operating level and the adjusted fuel costs, and that's adjusted for fuel handling, SOx and NOx emission, that's adjusted between the raw fuel costs and the adjusted fuel costs and we come up with a variable energy cost for the unit for that hour.

We then look at the -- at the gross revenues and the gross revenues are simply the operating level, and as you can see in the Operating Level column, that's mostly the maximum capacity but there's a few hours when the most efficient -- the capacity level were price equals MC is below the minimum, so the unit operates at the minimum level of capacity.

So we have variable costs here either reflect operation at max or operation at min. Gross revenues are the operating level times the hourly LMP. Energy costs are the operating level times the variable energy costs.

Then if we flip over, we have net revenues and we have two columns of net revenues; one is by the hour and the other is a 72-hour look-ahead, so it's a sum over the next 72 hours. And if the unit is not operating in the prior hour, the look-ahead over the 72 hours will adjust for startup costs. It will take the startup costs out of the net revenues.

We then look if it's a maintenance hour or unit retired hour. This unit has no maintenance or unit retirements in this day. We then look at the minimum up and down time. And that corresponds to our look-ahead window, how far we look ahead for profits.

We then look if it's an unconstrained start hour or an unconstrained dispatch hour. And we then look at the remaining down time. Now, since this unit was started in this hour and it was started because you can see in the first hour the revenues in that hour were profitable and the revenues over 72 were profitable so it starts, then it becomes a constrained dispatch hour for the remainder of its minimum uptime.

We look at its production which is its operating level from the previous page, its gross and net revenues, again, just copied over from the previous page, and then the net revenue per hour which is a subtraction of the energy costs from the gross revenue.

MR. DARR: What I'm going to do is offer to provide the -- what I would suggest we do at this point, given the complexity of what he's just described, is probably mark a redacted version and have that identified. Is that acceptable to the Bench and to the parties?

MR. CONWAY: Yes.

EXAMINER SEE: Do you have that ready? Do you have one ready now?

MR. DARR: I do not have one ready. I did not anticipate we would try to do this step-around. I would do that after lunch, if that would be appropriate.

MR. CONWAY: So you would black out all the values in the column then?

MR. DARR: Yes.

MR. CONWAY: Okay.

MR. DARR: And could we have this marked as IEU Exhibit 126.

EXAMINER SEE: We will reserve IEU 126 for that purpose to be provided after lunch.

(EXHIBIT MARKED FOR IDENTIFICATION.)

Q. (By Mr. Darr) And for purposes of the record, Mr. Meehan, the description you just gave is a description of what we have just asked to have marked as IEU Exhibit 126, correct?

A. That is correct.

Q. Now, with regard to the dispatch of this particular unit over this particular hour, is the assumption of the model that all of the generation associated with that unit would be dispatched into the PJM system at that point?

A. Yes.

Q. Is there any assumption made with regard to what the company may have offered for that unit to PJM in the day-ahead market?

A. Well, yes, implicitly, yes, the unit would be bidding at its cost.

Q. Is there any assumption made in your model with regard to whether or not a particular unit would have to be run because of a designation by PJM that it's a must-run unit?

A. Yes, there is.

Q. Where would we find that in your workpapers or in your analysis?

A. I would have a separate workpaper for the must-run units and I believe there's data in my analysis that identifies the must-run units. I'm sorry, data in my workpapers that items which units are must run.

MR. DARR: May we have a moment, please, just a moment?

EXAMINER SEE: Yes.

Q. The information that you used with regard to the designation of the must-run units, did that come from AEP or AEP Ohio?

A. It came from AEP Ohio, yes.

Q. Did you have any calculations with regard to must-run units based on transmission constraints as identified by PJM?

A. No. I relied on AEP Ohio to identify what units would be must run, and I believe I describe in my testimony I handled them differently.

MR. DARR: Thank you, that's all I have, and I will provide the redacted version of the exhibit after lunch.

EXAMINER SEE: Okay.

MR. DARR: Thank you.

EXAMINER SEE: Let's go off the record for a minute.

(Discussion off the record.)

EXAMINER SEE: Let's go back on the record.

Mr. Kurtz.

MR. KURTZ: Thank you, your Honor.

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CROSS-EXAMINATION

By Mr. Kurtz:

Q. Good afternoon, Mr. Meehan.

A. Good afternoon, Mr. Kurtz.

Q. Would you turn to page 23 of your testimony. Is this the section where you begin your discussion on how you've calculated the energy credits?

A. Yes, it is.

Q. Okay. So I understand what you've first done is develop a calibrated hourly nodal price for market power described in this section of your testimony?

A. Correct.

Q. Okay. So once you have the market price, on page 27, I believe, you describe how you determined the detailed variable cost data for all the AEP Ohio generating units?

A. Correct.

Q. Okay. Then on page 28, the next step in your analysis question 27 is to analyze the dispatch of the units, the must run, the minimum load, the maximum, et cetera, to get a dispatch order?

A. That's correct.

Q. So what you've done is you've calculated the -- the gross margin or the average gross margin on all of the AEP Ohio generating plants assuming all the output from these plants was sold at market pricing; is that correct?

A. Almost. I would say you could calculate the average from it but I would say more calculated the total.

Q. If we look on your Exhibit 2, if we could -- you have the dollars and the kilowatt hours. We could certainly calculate the average; isn't that right?

A. That's correct.

Q. So what you've done is you've taken the AEP Ohio generation and you've assumed it was all going to be sold into the PJM spot market and determined how much over this three-year period the gross margin AEP could realistically be expected to earn?

A. Right. I valued the gross margin assuming it was all priced at the node LMP.

Q. You cited on page 34 major errors in the staff's analysis. One is the $200 million Gavin fuel error and the other is a -- the assumption that the staff witness used that the heat rate would be at the full load heat rate. That's a $256 million error in your mind?

A. Yes, they are both -- yes.

Q. Okay. So if -- if the Commission were interested in knowing how much profit or gross margin AEP Ohio was really going to make on power -- on energy freed up from shopping just for the shopping load rather than the assumption that all of the AEP Ohio's energy was sold at market pricing -- let me back up.

You understand that not all of AEP's generation in the real world is sold at LMP. They serve the standard offer load at the regulated rate.

A. Well, I think there is a buy/sell. I mean they sell at LMP at the node and buy back at the zone.

Q. Okay. But the SSO load pays the fuel adjustment charge and the demand and the energy charges as regulated by this Commission.

A. Like I said, I'm only addressing the gross margins. I really did not look into any of those other issues.

Q. I understand, but you calculated the

gross margin assuming all of the energy was sold at spot market LMP when, in fact, in the real world the majority of the energy is sold to nonshopping standard offer load. You -- isn't that correct?

A. I don't know the shopping percentage. It is correct that I calculated LMP of gross margins assuming everything sold at LMP and that other witnesses make whatever adjustments are needed after that.

Q. Okay. Now, if the Commission wants to know how much gross margin or profit AEP was likely to earn on energy freed up from shopping, that would be a different calculation, wouldn't it, than what you've done is assuming that all of the energy sold is at LMP?

A. What I've done is assuming all of the energy is sold at LMP, yes.

Q. Okay. And if the Commission wanted to know how much money in the real world gross margin AEP was likely to make from energy freed up, that would be a different calculation, wouldn't it?

A. Yes. I have not made that calculation.

Q. Okay. For example, the Gavin error would be irrelevant if the Commission were looking at how much gross margin AEP would make off of selling energy that was freed up from shopping? Gavin would be irrelevant, wouldn't it, because that unit is dispatched first to meet native load?

A. I couldn't testify to it being irrelevant, no. I don't know that -- if you're saying Gavin would be retained to meet native load, other units would sell --

Q. You understand that the fuel adjustment charge in Ohio stacks the generation in terms of highest cost to least cost and the least cost resources are used to serve native load first and what's left over is sold off system --

MR. CONWAY: Objection.

Q. -- in the real world?

A. No.

MR. CONWAY: Objection. He was in the middle of answering the previous question and Mr. Kurtz interrupted him so I would like him, if he had more to say in response to the prior question, be afforded the opportunity to complete his answer before Mr. Kurtz follows up.

Could you read the prior Q and A.

EXAMINER SEE: Did you complete your answer, Mr. Meehan?

THE WITNESS: I don't believe I had but I don't believe that right now.

EXAMINER SEE: Read the question and part of his answer back.

(Record read.)

A. Right. I think what I was going to say is Gavin produces a lot of the margin, it's a big unit, so I don't think it would necessarily be irrelevant. I mean, you couldn't just pull Gavin out of the numbers that either staff proposes or I propose and say the rest is -- is some type of nonretained margin or use our analysis to say that it would apply to the other generation because we're looking at or I'm looking at the entire fleet versus the PJM market.

So I'm not familiar with the fuel adjustment clause or how that's done in Ohio. I don't know if Gavin would go at the bottom or if there would be proportions, but you would have to do an entirely different analysis if what you were trying to get at was what other margins on the units above the base load units that would be solved. This is just an entirely different analysis I'm doing.

Q. That's my point, and those are the units that are actually serving off-system sales, aren't they?

A. I haven't looked at that.

Q. Well, you understand the economic dispatch order of utilities, don't you?

A. Yes.

Q. Okay. They dispatch the lowest cost unit first and so on and so forth up to meet demand, correct?

A. That's correct.

Q. Now, according to your workpapers, Gavin is a -- is a $29 per megawatt hour variable cost unit which is right at the bottom of all the -- of all the AEP units you have modeled, isn't that right?

A. It's one of the more economical. Some of the gas units can get that load as well.

Q. So if Gavin were dispatched first to meet native load, all of those costs would be recovered in the fuel adjustment charge for nonshopping customers, correct?

A. You know, you would have to ask an AEP witness how the fuel adjustment clause works. I just don't know.

Q. Again, if the Commission were concerned about how much profit or gross margin AEP was going to make in the real world from energy that was freed up from shopping, then to the extent that the cycling costs -- heat rate costs are recovered in the fuel adjustment charge, you would have to take that into account in your analysis, wouldn't you?

Let me rephrase. The high heat rate costs that are inherent in cycling the units to the extent that that's reflected in the fuel adjustment charge for nonshopping customers in Ohio, that cost is already picked up, isn't that true?

A. Would you repeat the question?

Q. Yes. You understand that -- just assume that most of the load -- load in Ohio is not shopping right now and there's a fuel adjustment charge to recover costs to the extent they are cycling costs built into the -- the cost of serving native load, that's recovered implicitly in the fuel adjustment charge or directly really through -- through higher fuel costs associated with a worse heat rate?

MR. CONWAY: Your Honor, I would object at this point. The witness has already indicated he's not familiar with the operation of the fuel adjustment clause and Mr. Kurtz is asking him to assume that it works in a certain fashion and agree with his assumption. So I think it's unfair to the witness and I think it's also misleading. I think the witness doesn't -- isn't able to help Mr. Kurtz with this line of questioning.

Q. I'll rephrase. You've calculated a $256 million heat rate error in staff's testimony; is that correct?

A. Well, I wouldn't call it a heat rate error. It's failure to recognize the full range of heat rates and plant operation at the most efficient level and cycling and the need to run at minimum load sometimes.

Q. Okay. How should we just characterize that? Can we call it a heat rate error?

A. I think it's failure to model constraints.

Q. You've identified a $256 error in staff's testimony for failure to model operating constraints; is that correct?

A. Correct.

Q. Okay. Is it correct that it's about 2.3 dollars a megawatt hour error?

A. I haven't calculated that.

Q. On your Exhibit 2 you have generation under three different assumptions. Which generation should we use? I assumed it was -- the first scenario all the AEP units.

A. No. The 256 is actually not on here.

It's related to the non-must-run coal units only.

Q. Right. So $626 million error but -- which generation gigawatt hours should we divide by to get a price per megawatt hour?

A. It's none of the ones on Exhibit ETM-2.

Q. So there's a $256 million error you've identified. Isn't it true that to the extent that those costs are recovered from nonshopping customers in the fuel adjustment charge, then -- then that -- that amount of money is already being recovered?

MR. CONWAY: Objection. He's already indicated he's not familiar with the operation of the FAC.

EXAMINER SEE: Overruled. Answer the question, Mr. Meehan.

A. Well, I mean it sounds like a total gig. You are asking me to assume if costs are recovered that are already recovered. I think I would have to agree with that.

Q. Okay.

A. But I don't know that to be a fact.

Q. Assume that off -- that the cheapest generation is serving native load and that's recovered through the fuel adjustment charge. As -- as there's more shopping and you move down the stack, the profit margin, again, by -- almost by definition is going to be higher for each megawatt hour sold off system as you move further down the stack; isn't that right?

In other words, it's not an average -- it's not an average margin, it's a margin that changes with the level of shopping.

A. Well, your profit margin is certainly higher on your lower-cost units, but one of the reasons I'm reluctant to go here is I don't know, for example, if a unit is running at minimum load it's not going to be the lowest cost generation.

It may in a later hour be the lowest cost generation, but I don't know how the fuel adjustment clause, for example, would handle it if that unit was the most expensive unit in that hour but happened to be on at minimum.

Q. Now, you indicated there would have to be an entirely new analysis if the Commission wanted to know how much profit margin was made on energy freed up from shop -- from shopping. What -- how would that analysis have to work?

A. Well, I think it would depend on how you would structure the problem and maybe you could do some of it out of the hourly results here. But I'm following the gross margin model, it's the same model that Mr. Harter and Ms. Medine put in, so I'm trying to critique that and emulate that.

If we're -- what I'm responding to you on with the new analysis is if there is instead some desire to say, okay, here's generation and here's the generation used to meet the nonshopping load and here is the average costs and then here is the sales of above that that are made either to the pool or to the PJM market, I don't think my analysis is intended to look at that and, of course, a lot of things would have to change including the denominator of the capacity you're using, the fixed costs. All of that would have to be somehow adjusted so it was consistent.

Q. Isn't that the real world question though for the Commission? Not how much profit margin could be made if all the power AEP generates is sold at LMP. We know that's not true. We know the majority sold to nonshopping customers.

If the Commission wanted that real world answer, then your testimony doesn't address it; isn't that correct?

A. Well, my testimony addresses I think what's the real world projection of gross margins, that's the framework, as I said, used by Mr. Harter and Ms. Medine that the company's using and I think they have a way to adjust that to the Commission's satisfaction but it's not intended to look at the whole operation of the fuel clause and what generation is retained for serving nonshopping load. It doesn't look at that.

MR. KURTZ: Thank you, your Honor.

EXAMINER SEE: Mr. Yurick?

MR. YURICK: No questions, thank you, your Honor.

EXAMINER SEE: Ms. Thompson?

MS. THOMPSON: No questions, your Honor.

EXAMINER SEE: Ms. Kyle?

MS. YOST: Yost.

EXAMINER SEE: Yost, sorry about that.

MS. YOST: We switched out this morning.

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CROSS-EXAMINATION

By Ms. Yost:

Q. Good afternoon, Mr. Meehan. My name is Melissa Yost, I'm with the Office of Ohio Consumers' Counsel.

A. Good afternoon, Ms. Yost.

Q. If I could have you take a look at your testimony which is Exhibit 144 in front of you, specifically page 33.

A. Yes, I'm there.

Q. Question 34. Question 34 is in regards to "How can you be sure that your analysis doesn't grossly understate the gross margin?" Do you see that?

A. I do.

Q. And in regards to your answer starting on line 13, is states in your answer "Adjustments from the AD Hub which is the traded product to the AEP generation hub and then to each generation node could also be done slightly different -- differently by different analyst - for example using a 7 by 24 as opposed to on and off peak basis differentials or using individual months as opposed to annual average basis, but again, that impact will not be material relative to the difference with EVA."

In regards to your statement that it would not be material relative to the difference with EVA, what do you mean by that?

A. Well, I believe the EVA analysis is producing a number for gross margins of roughly 2-1/2 of what I have. And what I mean is that while you could maybe do something different in here and affect my results by a few percent either up or down, it's going to be irrelevant relative to the gap of the two and a half times.

Q. Can you quantify your answer in terms of millions of dollars?

A. I would say my judgment would be it could be a couple percent and I don't know the direction.

Q. So when you reference using example -- for example, a 7 by 24 as opposed to an on and off-peak basis differential, do you know what the result would be if you used your methodology with those different adjustments?

A. I have not run all the permutations in my methodology, no.

Q. Are there such adjustments to the AD Hub that would be more likely to result in higher gross margins?

A. No. I don't believe so.

Q. Are there certain adjustments that would result in higher gross margins when you adjust both the AD Hub and the generation node?

A. I couldn't identify them. I don't think so.

Q. When you were running your calculation, did you use different adjustments to the AD Hub and then also change the generation node as you've indicated in your testimony?

A. I used the adjustment between the AD Hub and the generation node. I used the generator node shape, the generation hub shape, and then I just forward the generation hub to each generation node.

Q. So you ran several different calculations in getting your results? You made different adjustments --

A. No. They are just step-wise adjustments.

Q. So you ran your calculations and your methodologies just one time to get the results that are indicated today?

A. Well, we certainly iterated through a couple of times but I only -- I only made one -- I did not run for different adjustments between the AD -- AD Hub and the AEP gen hub or different bases between the AEP gen hub and the nodes. I just used the single relationship or single set of relationships.

Q. So you used the same set of relationships every time you ran your calculation?

A. Yes.

Q. Was that customary for you not to adjust those in order to find out what the --

A. For something like this analysis, yes, to use a single historical relationship look is customary.

Q. And in regards to line 8 you talk about that you've developed a logical set of commitment rules. What are those commitment rules?

A. I think I describe them later in my testimony, but essentially the commitment rules are if the plant is economic in the hour and for the next 72 hours, to commit the unit. To look at the startup costs at that point. At the end of the dispatch to, again, look ahead 72 hours and look at the plant economics and make a decision upon shutting it off or keeping it running at that point.

They basically all look at the profit in the hour and the 72-hour profit look-ahead.

Q. Now, these --

A. I'm using as 72 for shorthand for the minimum run and up and down time period. The different units have different up and downtimes so if it's 24, 36, 48, 72, I would look over the up or down time commitment PRE.

Q. Now, the commitment rules which you said you developed, did you develop them specifically for this project or are these rules that you use consistently throughout your practice?

A. No. I developed them for -- for this project. You would have to look at data that would be very specific to each utility.

Q. And, again, when you were analyzing -- analyzing the values and determining the commitment rules for this product -- project here, did you at times change your commitment rules throughout?

A. Yes. I probably iterated through commitment rules to see what I thought was producing the most realistic dispatch.

Q. And when you ran your analysis, did you ever -- did your overall gross margin revenues ever increase in the amount that is indicated in your testimony today?

A. I couldn't really say because they were all preliminary results and had a lot of things that may have been corrected. Certainly we may have had some analysis with higher results and some with lower. I don't think we ever had substantially different results.

Q. Did you ever have any results that were $1 billion or more?

A. No.

Q. Do you recall any results over

900 million?

A. Again, I don't think with the full set of data but I just don't know. That's not impossible that at some point with preliminary data we have had for all units something in that range.

Q. Is there anything you could look at to refresh your recollection?

A. No. We probably would override those results.

Q. When you say "override those"?

A. We want to retain those results if we are making corrections to the model.

Q. Is there anyone else who would have knowledge of what the results were throughout the calculations?

A. I don't believe so.

Q. Did you share your results with company personnel?

A. Not until the end. These are the results I'm most comfortable with.

MS. YOST: Just a minute, your Honor.

EXAMINER SEE: Yes.

MS. YOST: Excuse me, if I could have the reporter read pack the answer about the response margins being over 900 million, please.

EXAMINER SEE: Sure.

(Record read.)

Q. Just -- so just to clarify your answer, you do recall some results being -- showing gross margins over the -- in the $900 million range?

A. Not specifically, no. I'm just saying it's possible. I don't think it's possible that a correct run would have that but I can't rule out at some point we had a run that had that.

MS. YOST: I have no further questions. Thank you.

EXAMINER SEE: Thank you, Ms. Yost.

Let's take a lunch break until 2:00 o'clock.

(Thereupon, at 1:16 p.m. a lunch recess was taken.)

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Tuesday Afternoon Session,
May 15, 2012.

- - -

EXAMINER SEE: Let's go back on the record.

Mr. Jones.

MR. JONES: Thank you, your Honor.

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EUGENE T. MEEHAN

being previously duly sworn, as prescribed by law, was examined and testified as follows.

CROSS-EXAMINATION

By Mr. Jones:

Q. Good afternoon, Mr. Meehan.

A. Good afternoon, Mr. Jones.

EXAMINER SEE: Mr. Jones, do you want to pass that to me?

Q. Mr. Meehan, you had previously testified you had -- you were contacted by AEP Ohio about this case around April 26; is that correct?

A. I believe I said the 26th or 27th.

Q. 26 or 27. And did you -- and how were you approached about this case? I mean, what -- did they ask you to perform, was the scope of your engagement here was to criticize staff's analysis of the energy credit in this case?

A. Well, to review staff's analysis and provide my opinion.

Q. And who made contact with you about that?

A. It was counsel for AEP. I believe it was either Mr. Nourse or Mr. Crespo.

Q. And who did you work with in preparation for your testimony?

A. Well, with counsel, Mr. Nelson, Mr. Vaughn, Mr. McClean at AEP and a variety of people at AEP.

Q. Okay. And let me ask you, is AEP -- are they a significant client of NERA?

A. Not probably on a percentage basis, certainly well less than 1 percent.

Q. So have --

A. Probably less than half a percent. But obviously they are a client.

Q. Have you had a steady relationship with AEP Ohio?

A. Well, my colleague testified for them last year in the ESP case. Prior to that I don't think we've done anything for quite a while with AEP Ohio.

Q. Okay. And were you asked to estimate

energy credit for this case?

A. To the extent that it would be helpful in sort of demystifying the EVA analysis and provide useful information, yes. No -- well, sorry. The gross margin I was asked to look at in that context. I was not asked to estimate the energy credit.

Q. Okay. Mr. Meehan, can you explain the difference between a forward-price curve and a forecast?

A. Yes.

Q. What is that difference?

A. A forward price is something that's observed in the market, it's a buyer and a seller. It's quoted. It's traded, business transacts at it. A forecast is sort of a person's view of what the -- of what market will be in the future. Usually based on some type of modeling exercise.

Q. So would you agree then that a forward-price curve reflects on what parties may be willing to transact today for a date and a time in the future but may not necessarily reflect that -- that market price in the future?

A. I think both -- I mean, neither a forward price nor a forecast is going to reflect the price in the future. The price in the future is going to change from what you would forecast or project with a forecast market price -- a forward-market price at this time. I think a forward-market price is the best forecast of the market price in the future.

Q. So is it your testimony that the only reliable number to use in the analysis of the energy credit in this case is the forward-price curve power?

A. More or less, yes. I mean, I think if a forward price exists for a product or a commodity, as I say in my testimony, I think it's sort of arrogant to say you have a forecast that's better than that. If you do, you probably should be out trading, not -- not testifying.

Now, there is a lot of reasons for a model -- model provides more information if you're looking at fuel consumption, fuel usage, or comparing alternatives. But when a forward price is available, I think it is generally superior to a view of the market developed from a forecast.

Q. Well, isn't it true, Mr. Meehan, that the forward-price curves change hourly and daily?

A. That's one of the benefits. They reflect the latest market information where forecast takes a while to prepare and by definition is dated.

Q. And by the fact they do change hourly and daily, then, how do you decide which forward-price curve to use?

A. I think you would use the more recent -- most recent one.

Q. And what do you do if there's a material change in the forward-price curve subsequent to your analysis?

A. You should update your analysis. I mean, you have the same changes in forecast. Your forecast would change if you updated it. Your forecast doesn't not change because it has the virtue of being stable. It is the virtue of not changing because it gets dated.

Q. And do you know if AEP hedges future power prices?

A. I'm not aware of their hedging policies.

Q. And do you have any expertise in fuel supply?

A. Well, I work with fuel data all the time but I would not consider myself a fuel supply expert, no.

Q. Okay. Expert in coal or natural gas?

A. Well, I'm more familiar with natural gas; coal I would not consider myself an expert.

Q. And are you familiar with the Cross

States Air Pollution Rule, the CSAPR, pronounced "Casper"?

A. I'm generally familiar with that, yes.

Q. Okay. And what -- what is your understanding of the requirements of that rule?

A. I just know it puts environments on a variety, specifically of older units, particularly older coal units, and that there's a lot of talk enacted if it's not stay released it would lead to certain retirements of the units.

Q. Okay. So it's your understanding that currently that rule is -- has been stayed being effective?

A. That's my understanding, yes.

Q. Let me ask you, does the forward-price curve reflect that rule?

A. Yes.

Q. And do you also understand that staff's analysis reflects the rule going into effect January 1, 2013?

A. I think it reflects an analyst's adjustment of what would happen under that rule, yes.

Q. And do you disagree with that assumption?

A. I would rather trust the market. I really didn't critique that specific assumption. I don't have a specific opinion myself when the date that CSAPR is going to go into effect.

Q. Now, in regard to the inputs that were provided to you by AEP Ohio, was any of that information proprietary?

A. I believe most of it is proprietary, yes.

Q. And --

A. Well, it's confidential at least. I don't know if it's proprietary but it's confidential.

Q. And does it make the -- because it's proprietary, does it make it difficult then to fully examine and validate that information by others?

A. I don't know that that's the case. They provided -- I mean it's confidential but it's all been provided in workpapers.

Q. Let me ask you was the basis of the coal prices the '01 FERC Form 1 data?

A. That really is a question for -- for Mr. Nelson. My understanding though is it's the contracts that are in place to supply those units in the near future, not the Form 1 data.

Q. And do you know whether or not those prices varied by year then?

A. Yeah, I believe I covered that with Mr. Lang, yes. They vary by month.

Q. How about the emission allowance price forecast for SO2, seasonal NOx, and annual NOx? What assumptions were made there for you?

A. I think they varied more by year than by month, but they are all in my workpapers. I can't recall the exact values. I can't recall the values at this time.

Q. And did AEP Ohio provide you with the heat rate curve for each plan?

A. Yes.

Q. And is this data publicly available?

A. Not to my knowledge, no.

Q. Okay. And what did AEP Ohio provide you with respect to the variable operating costs of that plan?

A. They provided me dollar per megawatt hour estimates.

Q. And this data is publicly available?

A. You would have to ask Mr. Nelson that.

Q. Okay. And did you review all the inputs that you received to determine either their accuracy or their appropriateness for use in your analysis?

A. No. I believe I indicated in my testimony I relied on AEP for those cost inputs. They are more familiar and they have a witness who could validate the inputs.

Q. And the forward-price curves of power, the annual numbers for 2013 and '14; is that correct?

A. And '15.

Q. And '15. So you're saying, yes, that's correct?

A. That I used annual curves?

Q. Yes.

A. What is the question?

Q. Yes, the annual forward-price curves for power being annual numbers.

A. Nothing to do with where I got them, just did I use them?

Q. Yes.

A. Yes, I used them.

Q. And what adjustments, if any, did you -- what adjustments, if any, did you make to reflect prices varied by hour? Did you make any adjustments?

A. Yeah, I think it's in my testimony and we went through this this morning as well. I first adjusted those annuals to monthlies looking at the trading pattern of monthly to annual forward products from January, 2009, to I believe March, 2012. I then looked at the LMP shape of -- at the AEP generation hub for a shaped hourly product to a flat product to just those forward prices. And then I looked at the basis between each generation node and the AEP generation hub to shape those forward prices not only to monthly on and off peak but to hourly LMPs.

Q. Do you know how coal was delivered to the Muskingum River station?

A. No.

Q. Do you know how coal is delivered to the Mitchell station?

A. No.

Q. Do you know the type -- what types of boiler Kammer has?

A. No. I think all the information that I got is summarized on sort of in the heat rate curve and the operating characteristics. I don't look at that detail.

Q. Okay. Are you aware that the Department of Energy recently released its short-term energy outlook which states that coal prices are expected to fall? Are you aware of that -- of that publication?

A. I have not looked at that publication. I've heard that statement in this room I think yesterday.

Q. Okay.

A. But as I said, I believe that would be more properly directed to Mr. Nelson, and I believe as I said, most of the coal as I understand it is already under contract.

Q. And if the CSAPR rule goes into effect, let's assume it does, January 1, 2013, do you expect coal -- coal demand to fall further?

A. Could. I don't think it would affect prices that are already contracted for but coal demand could fall.

Q. What about spot prices?

A. I guess all else equal, they would -- they would rise, although the way gas prices are, they certainly could be limited by the -- by the gas unit and economics.

Q. Are you saying that if demand falls, price will rise?

A. Spot prices?

Q. Yes.

A. I think what I'm saying if supply falls, if the supply of coal generation falls because of the CSAPR rule, spot prices would rise. So it's not if demand falls. It's supply that's falling.

Q. Coal prices would fall?

A. I don't think that was your question. Your question was would spot prices rise or fall.

Q. Right.
A. Right. If all that happened was coal prices fall, then spot prices should fall.
Q. And do you know what AEP Ohio assumes with respect to the CSAPR rule for their analysis?
A. Well, I think all I could tell you is the effects of that would show perhaps in the retirement dates that they supplied.
Q. Okay.
A. And there's a fair amount of units that retire in sort of midway -- well, not midway, let's say right around after the first quarter of 2015.
Q. And what emission costs did you use in your analysis? Did you provide that?
A. I provided it. I don't recall it off the top of my head but it's certainly in my workpapers.
Q. Okay.
A. There's a SOx cost and NOx cost I think by zone.
Q. And you say that's a document in your testimony?
A. No, it's in my workpapers.
Q. Workpapers, okay. And would you please provide the outputs -- the outputs you provided to AEP Ohio?

A. They are in Exhibit ETM-R2 and Exhibit ETM-R3.

Q. Are these your outputs, Mr. Meehan, or was there any filtering done by AEP, any manipulation of your outputs?

A. AEP had no input at all into my outputs.

Q. And, Mr. Meehan, is NERA, is it a licensee of Aurora?

A. I believe our European -- one of our European offices has a license to Aurora. I don't know if they currently use it but if they did, they would be having the European data set modeling in Europe. NERA, we do not have any license currently to Aurora or use Aurora at the present time. In the U.S.

Q. Okay. For your analysis did you rely on any Aurora analysis being done by AEP Ohio?

A. No.

Q. Did you have any discussions about Aurora modeling with AEP Ohio?

A. AEP Ohio asked if we ran Aurora and had it and I told them no, we did not.

Q. And your European office, do they license the nodal or zonal version of Aurora?

A. I wouldn't know. I wouldn't know what's appropriate to Europe either.

Q. Okay. So you personally never worked on any analysis involving an Aurora?

A. I never worked firsthand with Aurora, no.

Q. And are you aware that AEP is a licensee of Aurora?

A. Yes.

Q. Mr. Meehan, have you ever valued a utility generating asset?

A. Yes, I have.

Q. And how do you reflect energy margins in your evaluations?

A. Projected energy margins, discounted net present value.

Q. And you concluded from your testimony that EVA overstate gross margins; is that correct?

A. Yes.

Q. Okay. And that the overstatement is due to power prices that are too high and costs that are too low; is that correct?

A. I believe the power prices are somewhat too high and not adjusted to nodal. I believe the costs are too low, especially the Gavin fuel costs which I think is the most significant error. And then I believe the modeling of just the full load heat rate is inappropriate.

Q. Mr. Meehan, if power prices are higher and all other things being equal, then would margins, would they be larger?

A. All other things equal, higher power price also tend to increase margins, yes.

Q. Okay. And the effect on the margins would be larger than the effect on the power price?

A. Yes.

MR. JONES: At this time, your Honor, I would like to mark an exhibit for the record. Approach the witness?

EXAMINER SEE: Yes.

MR. JONES: This would be Staff Exhibit 110.

(EXHIBIT MARKED FOR IDENTIFICATION.)

Q. Give you a second to look that over.

I have handed you, Mr. Meehan, what has been marked as Staff Exhibit 110. Do you see that before you?

A. Yes, I do.

Q. And this is the forward-price curve presented in the source used for this -- these curves are the energy velocity sweep and the trading from January 4 of 2010 through May 7, 2012. Do you see all that information being provided on the graph there?

A. Yes, I do.

Q. Okay. And I would like to begin by asking you, first of all, do you know what year this case started, this capacity case?

A. No.

Q. Would you be willing to accept, subject to check, that this case started in 2010?

A. Yes, I think I could check this, yes.

Q. Okay. And you would agree with me, would you not, that today we're sitting in 2012, correct?

A. Yes.

Q. Okay. Now, looking at this exhibit, Staff Exhibit 110, if this hearing were being held on December 31, 2010, would gross margins you calculated be the same or different?

A. Well, I'm sure they would be different. But, again, all else equal, of course, they would be significantly higher but you would then have to look at the costs as well. A fair amount of my gross margin comes from the gas plants. I don't know if we would have had those in 2010. But certainly I think at any point in time going back to 2010, this level of difference in energy prices would have produced a different estimate of gross margins.

Q. And let me ask you, if the hearing were to be held in October of 2012, would your gross margins be the same or different looking at Staff Exhibit 110?

A. Did you say October, 2012?

Q. Yes.

A. Well, we don't know what the price is going to be in October, 2012.

Q. I'm sorry, I'm sorry, March, March, 2012.

A. It looks like they would have been somewhat different. The prices look a little lower, actually, in March '12.

Q. So between those two -- those points we discussed, which -- which point would you choose if you had a preference?

A. Well, I would choose the most recent point if I was trying to figure out what the most real projection is. As of the current time.

Q. Okay.

A. And I think the same is true with if I forecast, any forecast you properly made during these times would have changed as well.

Q. And it's most likely, is it not, Mr. Meehan, that forward price also change in the future?

A. Sure. Forward prices change and responds to market conditions for the future. You can see they generally have -- it looks like they sort of have two levels in here, one, pre-January, 2012, and then another after January, 2012, but even within those levels they do oscillate some.

Q. And, Mr. Meehan, is it fair to say your analysis is based on a single point of the graph on this exhibit for your analysis?

A. Sure, and I think the same is true of any forecast you would make.

Q. Mr. Meehan, can you predict forward prices one month from now or one year from now for that matter?

A. I can't, no.

Q. Mr. Meehan, does -- how does EVA's price forecast compare to the 12-30-2011 forward-price curve?

A. I did not compare it to the 12-30-2011 forward-price curve.

Q. Mr. Meehan, did you independently review the fuel cost assumptions that AEP provided to you?

A. No. Mr. Nelson testified to those.

Q. And would you agree, Mr. Meehan, that the single largest cost is fuel, so if AEP Ohio is overstating fuel cost, your margins would be understated?

A. And vice versa, yes. I mean, fuel is very important to the analysis.

Q. Mr. Meehan, does the AEP pool operating agreement have a significant impact on AEP Ohio's earnings?

A. I couldn't answer that question. I haven't reviewed any detail on that.

Q. Let me ask you, Mr. Meehan, did you employ Pro-Mod to do your analysis?

A. No.

Q. Let me ask you, Mr. Meehan, in conducting an analysis of the Eastern interconnect, is anybody's bias imposed into the analysis by customizing inputs for one utility but not the others, particularly if they are based upon a different methodology in the -- in the heat rates, average heat rates versus optimum heat rates? Would there be a bias there if you applied two different heat rates there?

A. I don't think you can answer that question generally. It depends on what's in your data set. It depends if you approved the data for one utility and that was far out of line and the other utilities are not out of line or other plants aren't out of line, you are improving your analysis. Generally I believe it's good practice to correct known errors. And update when you can.

Q. Have you ever used different heat rates for your analysis?

A. I don't understand the question.

Q. Well, you said that -- give me an example of how -- when you would do that, when that has been done and your involvement.

MR. CONWAY: Could I have the question read back, please?

(Record read.)

MR. JONES: I withdraw the question. It's convoluted. I withdraw that.

Q. Mr. Meehan, does your analysis account for minimum up and minimum down time for all units?

A. For all nongas units and non-must-run units it does, yes.

Q. And does your analysis accurately capture plant behavior?

A. I believe it does.

Q. And what hourly data did you use to calculate the 8,760 price shape?

A. The 2011 AEP gen hub shape.

Q. And is that data publicly available?
A. Yes.
Q. And can unit requirements affect the market price of electricity?
A. Yes.
Q. And will it affect the hourly prices uniformly across all hours?
A. Not necessarily.
Q. And how does your forecast deal with changes in price shape?
A. Well, as I said, in the 2011 price shape we have 8,760 samples. But I do not try to forecast changes in price shape. I don't believe they would be material to my results.
Q. Let me ask you how did you validate the basis differential between the AD Hub and the AEP gen hub?
A. Well, I used historical data.
Q. And how well does the hourly AD Hub predict AEP generation hub at an hourly granularity?
A. I think -- I think predicts it fairly well. I was confident using just one average basis applied to the shape. Certainly there are some variations in individual hours between that basis.
Q. And your -- so you can provide a

confidence interval around your basis?

A. I don't have a statistical confidence at the moment.

Q. And how can you be confident then if you don't have that?

A. Well, I've worked with these shape data for quite a while and I know that shapes tend to have a pretty small impact on your end result. So as I said, why different analysts could have done different shaping of the forwards to hours as long as you have a reasonable day/night shape, you are going to get quite similar results in terms of the gross margin.

Q. Mr. Meehan, is it true that the conversion from monthly to hourly data exclusively relies on hourly data from 2011?

A. That's correct. We use one year, 2011.

Q. Okay. And any anomaly in the shape of the 2011 data would then be propagated forward; is that correct?

A. True, but as I said, you got 8,760 samples in that one year.

Q. And was there anything unusual in the 2011 data related to loads?

A. Not that I'm aware of.

Q. Did you check to see if 2011 was normal or abnormal in regard to weather?

A. You mean like heating degree days or something? I did not do that check.

Q. You did not do that?

MR. JONES: That's all I have. Thank you.

THE WITNESS: Thank you.

EXAMINER SEE: Mr. Conway? Any redirect?

MR. CONWAY: Thank you, your Honor.

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REDIRECT EXAMINATION

By Mr. Conway:

Q. Mr. Meehan, towards the end of Mr. Jones' cross-examination he asked you whether you could predict I believe it was forward prices one month from now. Do you recall that?

A. Yes.

Q. And can you or any analyst predict what a properly executed forecast would produce one month from now?

A. No. I don't think we could.

Q. And do you recall a line of questions from Mr. Kurtz regarding an analysis of gross margins from energy freed up from capacity sales as opposed to analyses of gross margins such as the type that you and Staff Witness Harter and Staff Witness Medine conducted?

A. Yes, I do.

Q. Okay. And I believe Mr. Kurtz asked you about whether the margins produced by the generation fleet at the top of the stack would be lower than what would be produced by the generation at the bottom of the stack. Do you recall that question?

A. I'm not sure about the lower but I recall a question about the difference at the top and the bottom of the stack, yes.

Q. And how would gross margins in your view produced from generation at the top of the stack compare to gross margins from generations further down -- generation further down the stack?

A. Well, holding the price constant as you go down the stack, your gross margin is going to increase. So your lowest gross margin is going to come from the unit at the top of the stack, which is the most expensive and it will decrease as you move down.

Q. And do you recall a question or two from Mr. Darr regarding whether it would be appropriate to calibrate and administratively determine any credit?

A. Yes.

Q. And when you -- when you testified in response to that question affirmatively, what was your understanding of what -- what was being administratively determined?

A. My understanding was the energy credit would be administratively determined so from testimony on various things using different models, different approaches, the administrative determined would be -- determination would be the Commission saying X is the energy credit.

Q. Well, if the administratively determined energy credit is based on an approach such as the one that Dr. Pearce conducted on behalf of the company, based on embedded costs or historical view of costs, in that type of an analysis would it be appropriate or necessary to conduct a calibration of the results?

A. Well, if you are using actual results, they should already be calibrated.

Q. And so that's your answer, in that situation they are already calibrated?

A. In that situation they would be calibrated.

MR. CONWAY: That's all I have, your Honor.

EXAMINER SEE: Recross, Ms. Kaleps-Clark?

MS. KALEPS-CLARK: No recross.

EXAMINER SEE: Mr. Lang?

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

EXAMINER SEE: Ms. Kingery?

MS. KINGERY: No, thank you, your Honor.

EXAMINER SEE: Mr. Darr?

MR. DARR: No, thank you.

EXAMINER SEE: Mr. Kurtz?

MR. KURTZ: No, thank you, your Honor.

EXAMINER SEE: Mr. Yurick?

MR. YURICK: No, thank you, your Honor.

EXAMINER SEE: Ms. Yost?

MS. YOST: No, ma'am.

EXAMINER SEE: Ms. Thompson?

MS. THOMPSON: No questions.

EXAMINER SEE: Mr. Jones?

MR. JONES: No, your Honor.

EXAMINER SEE: Thank you, Mr. Meehan.

THE WITNESS: Thank you, your Honor.

MR. CONWAY: Your Honor, at this time I would renew my motion for admission of Mr. Meehan's rebuttal testimony AEP Ohio Exhibit 144.

EXAMINER SEE: Are there any objections to AEP Exhibit 144?

MR. DARR: No, your Honor.

MR. CONWAY: And your Honor, I'm sorry, I just want to make sure my -- that it's clear by my motion and my request to renew it I'm including the revised Exhibits ETM-R2 and ETM-R3. Thank you.

EXAMINER SEE: With that understanding AEP Exhibit 144 is admitted into the record.

(EXHIBIT ADMITTED INTO EVIDENCE.)

EXAMINER SEE: Mr. Darr.

MR. DARR: Move the admission IEU-Ohio 125 and 126.

EXAMINER SEE: Are there any objections to the admission of IEU Exhibits 125 and 126?

MR. CONWAY: Your Honor, with regard to 126, the redacted worksheet, there's no objection. With regard to the Exhibit 125 for IEU, the white paper for the Compete Coalition, we do object on the grounds of relevance.

Any of the statements or text in this document, it's not -- it's not being made by any party to the case including AEP Ohio and I would just note that NERA is not a party to the case. And nothing in Mr. Darr's cross-examination related to the exhibit tied up to anything in Mr. Meehan's testimony on rebuttal so it's not impeachment of

Mr. Meehan's testimony, so I think it's inappropriate to admit it for any purpose. It's not relevant and it's not tied to any aspect of Mr. Meehan's testimony.

EXAMINER SEE: You want to respond, Mr. Darr?

MR. DARR: Certainly, your Honor. The document goes, first of all, to the witness's understanding of the markets and the role of competition and the proper role of competition certainly is an issue that's been presented in this case in multiple ways.

There's nothing with regard to rebuttal testimony that would limit my cross-examination with regard to that under Ohio Rules of Evidence and the broad scope that's granted by the statute to this Commission to allow evidence in. There would be no -- no restriction as to subject matter as implied by Mr. Conway's objection.

And finally, to the extent that it demonstrates points that we have made throughout this hearing that the proper role of this Commission is -- in this proceeding is to implement a competitive price, it clearly supports that as well.

EXAMINER SEE: IEU Exhibits 125 and 126

are admitted into the record.

(EXHIBITS ADMITTED INTO EVIDENCE.)

EXAMINER SEE: Mr. Jones.

MR. JONES: Yes, your Honor, Staff Exhibit 110.

EXAMINER SEE: Any objection to Staff Exhibit 110?

MR. CONWAY: No objection.

EXAMINER SEE: Staff Exhibit 110 is admitted into the record.

(EXHIBIT ADMITTED INTO EVIDENCE.)

EXAMINER SEE: I bet you guys want to talk about a briefing schedule. Let's -- yes, Mr. Meehan, you are dismissed.

THE WITNESS: Thank you.

EXAMINER SEE: Let's go off the record.

(Discussion off the record.)

EXAMINER SEE: Let's go back on the record.

The parties have suggested there have been a couple of briefing schedules suggested. After considering -- after considering the suggestions made and -- the Bench has decided that in light of the fact that the transcripts will be -- all transcripts will be included in the record as of end of business tomorrow, there will be one week for initial briefs and one week for reply briefs. They are, therefore, due May 23 and May 30.

If there is nothing further, this hearing is adjourned. Thank you all.

(Hearing adjourned at 3:03 p.m.)

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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 , May 15, 2012, and carefully compared with my original stenographic notes.

Karen Sue Gibson, Registered Merit Reporter.

(KSG-5525)

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